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IPH 4060 Final project:

Development of a transferable package of capacity and demand training to empower front-line staff to use change tools and techniques, informed by data, to improve their patient flows.

A project submitted to Middlesex University in partial fulfilment of the requirements for the degree of Masters in Professional Studies

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Abstract

The purpose of this project was to develop an approach to training for the National Leadership and Innovation Agency for Healthcare (NLIAH) that could be applied across the NHS in Wales to increase understanding at a local level of capacity and demand interactions. Through an action research approach a transferable package of capacity and demand training was developed. This aimed to empower front-line staff to employ change tools and techniques informed by data when undertaking improvement projects. This constituted part of the NLIAH Skills4Change programme: an improvement course for front-line staff which combines blended learning with practical action for improvement.

An analysis of questionnaire responses by former NLIAH capacity and demand training delegates identified the potential barriers to its application and its current wide-ranging use. These barriers were perceived as 'access to information'; 'no time to complete this project'; and 'extra work on my current role'. Application of the tools was largely evidenced in outpatient and inpatient departments. The action research project built upon these findings, testing the barriers in a therapeutic setting. This highlighted the differences in applying these tools in a more complex service provision area.

From the two threads of this research: questionnaire analysis and action research project, there are key elements which can be utilised to form recommendations for future employment of the package of training by NLIAH.

The presence of an external facilitator during the action research project, alongside management support was identified as crucial to the momentum of this work. The 'empowerment with support' model this provided ensured sustainability of the improvements implemented. However, it was evident throughout the project and from the

questionnaire responses, that organisational and service specific delivery of these tools is essential.

Tools, methods and strategies for implementation are where the Skills4Change training programme traditionally focuses, with a mixed service delivery. The findings from this research suggest that to ensure maximum benefit and sustainability the tools and techniques need to be made real and relevant to the training participants. They need to see improvement in action and experience the benefits of the changes they are making. Linking the training with an understanding of the organisational culture will enhance this. Staff will be empowered to continue to change their services for improvement, as they witness the support from the organisation in which they operate.

Acknowledgements

I would like to thank the National Leadership and Innovation Agency for Healthcare for their support during this work-based Masters in Professional Studies; the Paediatric Occupational Therapy team at Princess of Wales Hospital, Bridgend, who formed part of the action research project; and the former delegates of the Capacity and Demand training for their comments and contributions.

I would like to thank the Skills4Change programme team for their contributions to the final development of a transferable training package of service improvement, of which this project forms part, particularly Allan Cumming; Mike Fealey; Mark Thomas; Breeda Worthington and Nick Tyson.

I would also like to thanks the Middlesex University academic advisors for their contributions to my research.

Glossary

Access 2009	Referral to treatment waiting times targets set by NHS Wales, Welsh Assembly Government to be achieved by December 2009.
Access targets	Waiting times targets set by NHS Wales, Welsh Assembly Government.
Business Process Reengineering	<i>‘The fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed.’</i> (Hammer and Champy 1993, p32).
Carve out	A term given to circumstances where reserving some of a resource for one group reduces the resource available to another group, for example, sub-specialisation; cancer clinics; urgent and routine slots.
Centre for Change and Innovation	Linked to NHS Scotland, an organisation who supports the delivery of key performance priorities within the Scottish Government Health Directorates through the development and delivery of national improvement programmes.
Clinical Microsystem	An approach to continuous improvement which focuses on the clinical microsystem - the front-line units that provide most healthcare to most people.
Functional bottleneck	A bottleneck is any part in a system where patient flow is obstructed causing delays. A functional bottleneck is a service which receives demand from several sources, for example Radiology.
Guide to Good Practice Programme	National elective improvement programme supported by the National Leadership and Innovation Agency for Healthcare to improve waiting list management in

	secondary care. Capacity and demand training was originally provided through this programme.
Innovations in Care (IiC)	Welsh healthcare improvement organisation which merged with Centre for Health Leadership in 2005 to become the National Leadership and Innovation Agency for Healthcare.
Institute for Healthcare Improvement	An independent not-for-profit organisation helping to lead the improvement of health care throughout the world, based in the United States of America.
Juran Institute Continuous Quality Improvement/ Total Quality Management	An improvement approach based on identifying and maximising quality. This is promoted as an ongoing process.
Lean Thinking	An improvement approach focusing on flow and eliminating waste in processes, developed by Toyota.
Modernisation Agency	Organisation linked to the Department of Health established in 2001 to ensure investment throughout the NHS is matched with the necessary reforms to provide the highest quality of service for patients. Superseded by the NHS Institute for Innovation and Improvement.
National Leadership and Innovation Agency for Healthcare (NLIAH)	Organisation which supports NHS Wales at all levels to develop the capacity and capability to deliver the change agenda, helping to embed effective leadership, innovation, service improvement and workforce development across the NHS in Wales.

Plan Do Study Act (PDSA)	A small step change cycle of continual improvement. Also known as Plan Do Check Act.
Process Modelling	Visual capture of the dynamics of a system to promote discussion from those involved within that system.
Quad of aims	Objective-setting tool which identifies the purpose; customer impact; deliverables and success criteria of what you are trying to achieve.
Service Level Agreement	A contract held between NHS Wales, Welsh Assembly Government and service providers or supporting agencies such as NLIAH.
Six Sigma	A data driven methodology for eliminating defects in any process, by reducing variation and measuring process improvement.
Skills4Change Programme (S4C)	An improvement course for front-line staff which combines blended learning with practical action for improvement.
Soft Systems Methodology	An approach to system analysis which captures people's viewpoints and assumptions of the systems in which they operate.
Theory of Constraints	An improvement methodology which proposes that a process is only as efficient as its slowest step or constraint. The methodology focuses on identifying the constraint in a process; maximising the potential flow at that constraint, and therefore the overall process.

Introduction

There are two main elements to this piece of research: questionnaire design and analysis, and an action research project. This introduction outlines the structure of this research, explaining the layout of the chapters within this paper.

Issues with the delivery of capacity and demand training provided by National Leadership and Innovation Agency for Healthcare (NLIAH)¹ were identified through the lack of projects implemented within the service. In order to explore the reasons behind this, a questionnaire was developed and responses from former training delegates analysed. The results from this analysis formed the basis of the design of an action research project. The findings from the action research project were used to develop recommendations for the capacity and demand training within the Skills4Change programme².

This paper is divided into four chapters following the progression of the research. The first chapter provides the background to the entire research, focusing on the political and organisational context within which this research was undertaken. It also explores the questionnaire research as part of that background, including the analysis and findings to underpin the development of the action research project.

The second chapter positions the action research project in terms of current literature on change management and action research. It explores the methodology chosen for this research detailing how this was employed. This includes how the data was collected and analysed.

The third chapter outlines the findings from the action research project, focusing on two specific elements: the realities of the service

¹ See Glossary, page 10.

² See Glossary, page 11.

making the changes, and the people's reactions throughout those changes. This captures the practical, physical evidence of change, along with the conceptual, emotional experience of change.

The closing chapter draws together the findings from the action research project with the background questionnaire analysis, addressing the aims and objectives with some recommendations for the further development and employment of the Skills4Change programme.

Chapter One: Background and Context

There are two sections to this chapter. The first which outlines the political context of NHS Wales for this piece of research; moving to an exploration of the organisational context with regards to NLIAH with whom I am employed; and concluding with my personal motive for the project. The second section examines the basis for the action research project. In short, I identified a problem with the current delivery of service redesign training provided by NLIAH, as limited application became apparent in discussions with the service. The closing section of this chapter describes an initial exploration of that problem, through the development and analysis of questionnaires sent to former training delegates and how that analysis informed the action research project.

The increasing globalisation of industry over the last 50 years has resulted in stronger competitive markets. This has forced organisations to look at their efficiencies and make changes to streamline their processes. A number of approaches to change management have emerged from this need, such as Lean Thinking³ (Womack and Jones 2003) and Six Sigma⁴ (Pyzdek 2003). These approaches will be explored in more detail in the following chapter. The public sector has not remained immune to these pressures. The Labour government pledged increased public service spending when it came to office in 1997, overturning 18 years of Conservative thrift. The publication of the NHS Plan in 2000 outlined the severe caveats that accompanied the funding and change became inherent to the NHS. The Modernisation Agency was established in England to support the service through these changes. Ultimately the funding in England was supported by private sector input, reducing the gap further between the private and public sectors. The need for change in this increasingly competitive sector was heightened.

³ See Glossary, page 10.

⁴ See Glossary, page 11.

In Wales, with devolved power, and a strong history of a social model of care, the input from the private sector was minimal. However the similarities remain: resources within NHS Wales are limited; staff are working within complex and interdependent processes with an increasing need for more resources. Innovations in Care⁵ (IiC) was established within the Welsh Assembly Government to support the development of the service. The publication of the Welsh Assembly's plan for the next 10 years, Designed for Life (Welsh Assembly Government 2005), outlined access targets⁶ and service re-configuration required to ensure the NHS in Wales provided world class 21st century healthcare. This marked a shift away from traditional secondary care provision to focus on primary care and community services. In order to achieve this, community services would require enhancement, with the bulk of the funding being realised from savings within secondary care. With the margins for efficiencies already so tight, a clear and detailed understanding is required of which additional resources are needed and where. Currently all services are calling for resource enhancement. Often this is based upon analysis of historical activity data, projecting a percentage increase in demand. This does not take into account the impact of service improvements. The starting point needs to be the streamlining of current processes to ensure patient flow is maximised within current resources. In order to achieve this services need a detailed and clear understanding of their current capacity and demand.

A transferable package of capacity and demand training would empower front-line staff to use change tools and techniques, informed by data, to streamline their services. It would support appropriate requests for additional targeted resources, and therefore improve the overall patient journey. To develop this required a detailed exploration and understanding of the practical applications of capacity and demand

⁵ See Glossary, page 10.

⁶ See Glossary, page 9.

analysis. It also required an identification of the potential barriers to its application and an analysis of its current use.

With the publication of the Access 2009⁷ targets for NHS Wales looking at the total wait of a patient pathway, more services are being implicated in waiting times targets. Within Wales, diagnostics and therapies have not historically reported waiting times, or had access targets monitored. This situation has now dramatically changed. The potential impact of waits within these services on the total patient pathway waits has resulted in a shift of focus from the traditional elective surgical specialties towards supporting services requiring redesign. To ensure a smooth patient flow through these functional bottlenecks⁸, a detailed understanding of the capacity and demand interactions of these services is essential. The complexity of service provision, with the increasing carve out⁹ of resources, alongside the increasing sub-specialisation within services, has resulted in a complex map. Managers and clinicians find it difficult to manage this map and to understand the resources needed within each area to meet current and predicted demand.

To the service user of the NHS, wide-ranging use of these tools and techniques by front-line clinical staff will result in shorter waiting times and clearer routes of access and pathways of care. A smoother flow for the whole of the patient journey, whether it is through to surgery, or discharge is therefore achievable.

The former liC and NLIAH provided capacity and demand training workshops to enable staff to understand and apply the tools back in the workplace. This training was based on Kate Sylvester's work in the former Modernisation Agency¹⁰ (Modernisation Agency 2004), and

⁷ See Glossary, page 9.

⁸ See Glossary, page 9.

⁹ See Glossary, page 9.

¹⁰ See Glossary, page 10.

experience gained from applications within New Zealand. The didactic and mixed service approach taken appeared to have limited the results in the delegates' application of the tools back within their services. At various meetings I attended in the service as part of the Guide to Good Practice Programme¹¹, it was apparent that the fundamentals of this training were still being misunderstood, or overlooked. A year later, NHS Wales recognised that front line staff and middle-management needed a more structured approach to training in the tools and techniques of service redesign. A Service Level Agreement¹² to provide that training was established with NLIAH, and the Skills4Change programme was developed.

As a Senior Service Improvement and Development Manager (SSIDM), I was tasked with leading the Skills4Change programme: an improvement course for front-line staff which combines blended learning with practical action for improvement. A step approach was developed by a team of SSIDMs within NLIAH based on their experience and learning from other change management approaches, particularly, Six Sigma (Pyzdek 2003); Juran Institute Continuous Quality Improvement¹³ (Juran Institute 1993); Theory of Constraints¹⁴ (Goldratt and Cox 1992); PDSA¹⁵ (Langley, Nolan, Norman, Provost and Nolan 1996) and Lean Thinking (Womack and Jones 2003). Teams from across the NHS in Wales attend the course; select projects based on local issues they are facing; utilise the tools and techniques they learn, and with support from the trainers, where requested, follow a step approach to implement solutions.

A serious lack of understanding as to the potential effectiveness of such a programme resulted in two decisions from senior management. Firstly, the evaluation was based solely on numbers of delegates trained regardless of evidence of application or improvement. To a certain

¹¹ See Glossary, page 9.

¹² See Glossary, page 11.

¹³ See Glossary, page 10.

¹⁴ See Glossary, page 11.

¹⁵ See Glossary, page 11.

extent this reduced the amount of time the trainers could support delegates back in their workplace, as we had to focus on getting high numbers trained. Secondly, driven by the cost of running the workshops, a regional, mixed-service basis for the sessions was favoured. Whilst this had its benefits for breaking down some of the barriers of silo working, I felt teams could not explore their areas in enough depth to truly benefit from the reflective learning process the Skills4Change programme provided. I therefore decided to explore in more detail the results of the training provided historically by the liC team by asking former delegates to complete a questionnaire on the applications of the tools learnt. The results of this would then form the basis for an action research project, focusing on one service area, utilising the Skills4Change developing format to test and learn how to make this training more effective in empowering staff to improve their patient flows.

Context development for the research:

The ‘*correlational survey*’ (Punch 2005, p75) analysis of former capacity and demand training delegates looked at identifying common factors which may influence the adoption and application of the tools learnt. As outlined by Punch, ‘*The term ‘correlational survey’ is used here to stress the study of relationships between variables*’ (Punch 2005, p75). This evaluated where training was provided on a didactic, mixed service approach in three different groups:

- As part of a larger national quality improvement programme
- A Trust-based, mixed service delivery, as part of their internal quality improvement training
- A different country’s NHS service working with devolved policy and political power

The following text was developed to be used within the Skills4Change programme. It outlines the differences between the collection of data and the designing of that data collection process:

‘The process of collecting data follows a series of logical steps:

First we determine what information we need ... Second, we ask a series of questions in survey or interview format. We then collect the answers to those questions, fourthly we analyse the results. ... The design of the data collection process reverses these steps:

Once we understand what information we need, the first thing we still need to do is determine what questions we need to get answers to in order to get that information. We then decide how we are going to present the answers to those questions; thirdly, the method of presentation will determine to a large extent how we analyse the data. Our form of analysis, including how we might stratify that data, will determine what precise format the data collection will need to take; it will specify the data items, the sample size needed, the type of data to

be collected, and how the data will be collected. The data collection design can then be completed with the precise number and style of questions needed.'
(NLIAH 2006, p51)

This approach was utilised in the development of the survey. As Robson (2002, p241) outlines, *'The survey questions should be designed to help achieve the goals of the research, and in particular, to answer the research questions'*. The survey was developed to identify potential barriers to the transference of capacity and demand learning. It looked at its practical application following three different contexts of training.

Participants for the survey were selected over the same time period, 2004 to 2005, from mixed service training sessions. Three separate groups of participants were selected to provide further rigour and to explore if the context of delivery affected the extent of the barrier mechanisms; however the small number of returns negated the ability to further stratify the analysis.

As Dillman (cited in de Vaus 2002, p95) outlines, there are *'five distinct types of question content: behaviour, beliefs, knowledge, attitude and attributes'*. The survey was interested in the first three of these types: what people **do**; what people **believe** and the *'accuracy of these beliefs'* (de-Vaus 2002, p95) and sectioned to reflect this. Each section comprised qualitative and quantitative questions, i.e. number of times the training tools have been used or feedback of the key principles of the training in their own words.

Where lists were used, the design aimed to ensure these were exhaustive. I found this increasingly difficult when trying to identify which principle was not understood and I was concerned that this list of principles may influence the delegates' earlier responses. Initial returns have shown this not to be the case. The checklist Robson (2002,

p245-246) has adapted and abridged from de Vaus was referred to continually to ensure question wording was clear, unbiased and unambiguous. A copy of the questionnaire is included in the appendices (*Appendix 1*).

A PDSA (Langley et al 1996) approach was utilised for trialing the survey. The programme managers from the first identified national programme group were selected as a pilot group to test the first draft of the survey. This staff group was selected due to their detailed involvement in the application of these tools, and the pre-existence of this group as a pseudo-network. These were distributed with an overview of the research purpose and a request for comments and feedback as well as a completed questionnaire. Following feedback from this pilot survey discussions were held with two participants: one internal to Service Improvement, NLIAH and the second a Senior Manager with a clinical background and long-term experience of service redesign across England and Wales. This manager is also responsible for running training on service redesign tools in their organisation.¹⁶ These internal and external discussions provided a certain amount of validation to the feedback received.

The main issues identified in the pilot exercise regarded clarity of terminology; simplifying complex issues, or asking for too much information to be condensed into one question. The amended questionnaires following this feedback were issued via e-mail to the delegates of the three groups (*Appendix 1*).

The main point of learning from this exercise was that although Robson's (2002, p245-246) adapted checklist had been utilised; issues of

¹⁶ This organisation was also a pilot site for a capacity and demand flow model developed by Cardiff University and supported by the Welsh Assembly Government, looking at detailed timings of patients, instead of basing capacity and demand analysis on pure numbers of patients. Unfortunately this flow model was shelved after initial piloting as no further funds were available from the Welsh Assembly Government. Analysis has therefore reverted to numbers of patients.

individual perception were reinforced. The Skills4Change programme reinforces the importance of understanding with whom you are communicating. Whilst I have taught these concepts regularly throughout my professional role, this experience identified the ease to which we can revert to assumptions of peoples' perspectives and prior understanding. As a practitioner it is extremely important to re-visit these principles on a regular basis, which is one of the most important pieces of learning I gained from this project, particularly through the action research project and involvement in leading the Skills4Change programme.

Questionnaire responses:

The following table outlines the questionnaire response rates from the three groups identified earlier (*table 1*):

Table 1: The response rates from the three groups to the capacity and demand survey

	Group 1 ¹⁷	Group 2 ¹⁸	Group 3 ¹⁹
Delegates	94	38	82
Completed responses	12	3	11
% response rate	13%	8%	12%
Total responses	26		
Total response rate	12%		

The low response rates throughout the groups diminish the statistical viability of group specific analysis, therefore the analysis conducted combined the responses regardless of the group in which they sat.

¹⁷ Group one were the national quality improvement programme delegates containing largely senior and operational managers; nursing staff; information analysts and a small number of consultants.

¹⁸ Group two were the Trust-based delivery group. The Trust commissioned regular delivery of capacity and demand training from the NLIAH team for 60 staff over a one year period.

¹⁹ Group three were the national programme based delivery in a different country with devolved policy and political power.

The responses produced the following data:

- In the group 92% (24) of the responses came from the acute Trust sector with the remaining 8% (2) from Local Health Boards and commissioners, highlighting the acute historical focus of service redesign outlined in the earlier section on context.
- The first section of the questionnaire focused on understanding and application of capacity and demand training. In the group 67% (18) of responders had used or referred to the training material 'Once or Twice' with 21% (5) 'Never' and 12% (3) using the material 'Regularly'. In the group 64% (17) of the responders have 'implemented capacity and demand' studies in their area of work with 60% (10) of these applying the tools learnt 5+ times and 33% (6) 3 times.

These studies were carried out in the following areas (*figure 1*):

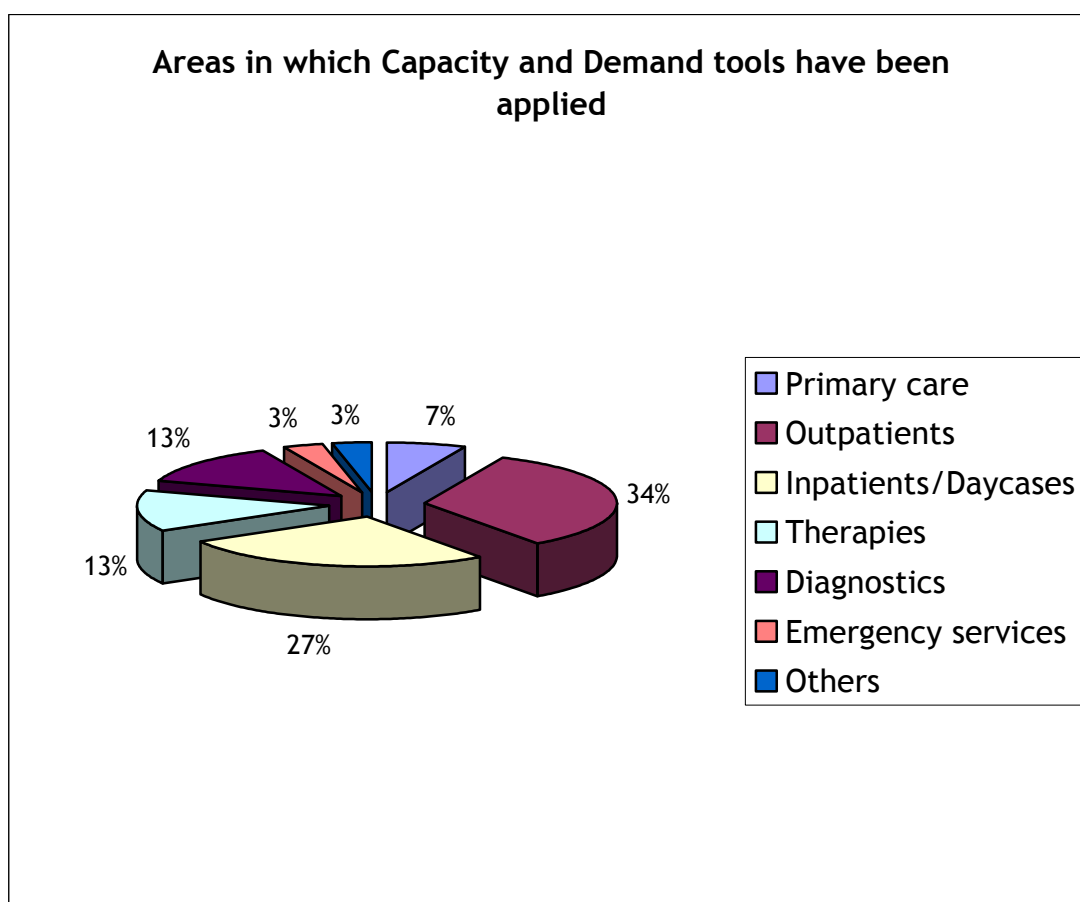


Figure 1: Areas in which capacity and demand tools have been applied according to capacity and demand questionnaire responses

As discussed in the beginning of this chapter, this supports the political focus to date on access targets for elective outpatient and inpatient/daycase services.

When asked *on a scale of 1-5 (5 being the most difficult)* how difficult was it to conduct the capacity and demand study the responses were as outlined in figure 2:

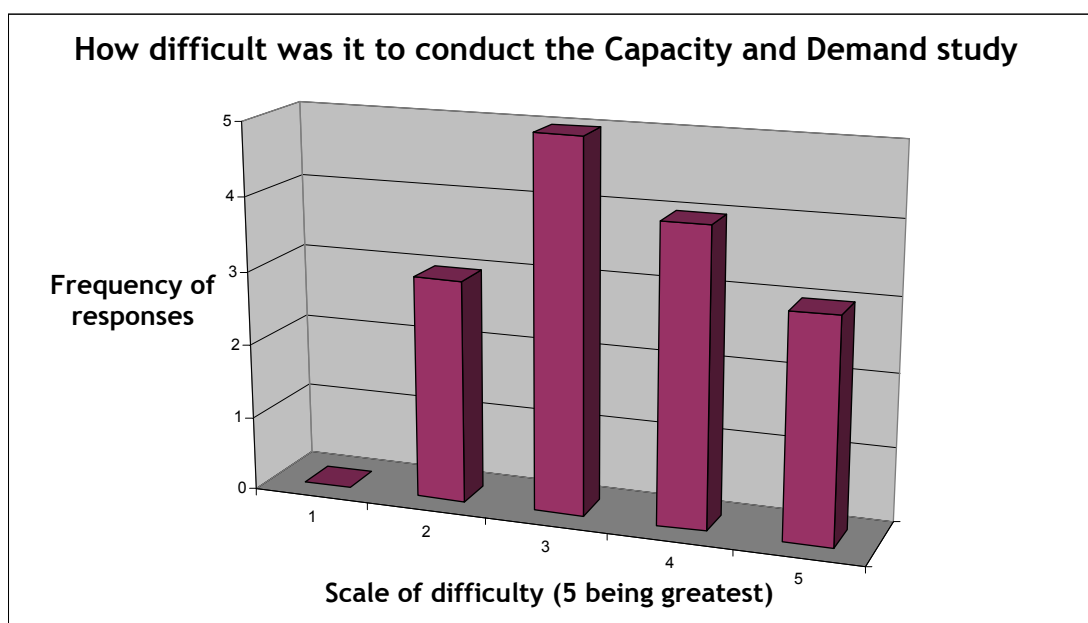


Figure 2: How difficult it was to conduct the capacity and demand study according to the capacity and demand questionnaire responses

The responses lean towards the more difficult end of the scale, however this does not allow for areas of application, i.e. is it more difficult in a specific service area?

The next section of the questionnaire focused on the barriers to implementing the learning from the capacity and demand training.

- In the group 92% (24) of respondents stated they understood the tools presented on the day, and of the 8% (2) who did not, the elements they did not understand were spread equally between *Calculating the 80th percentile*; *Conversion of Capacity, Demand, Backlog & Activity into time*; and *Comparison of Capacity,*

Demand, Backlog & Activity in units of time, with no responses for Timing the patients through the process.

The last section of the questionnaire focused on further support and training. As the application of the tools and techniques of capacity and demand require a certain level of information technology (IT) capability, respondents were asked to *Rate your level of IT literacy (1 being able to e-mail, 5 being able to use Excel for generating graphs)*. The following bar chart illustrates the frequency of responses for each scale (*figure 3*):

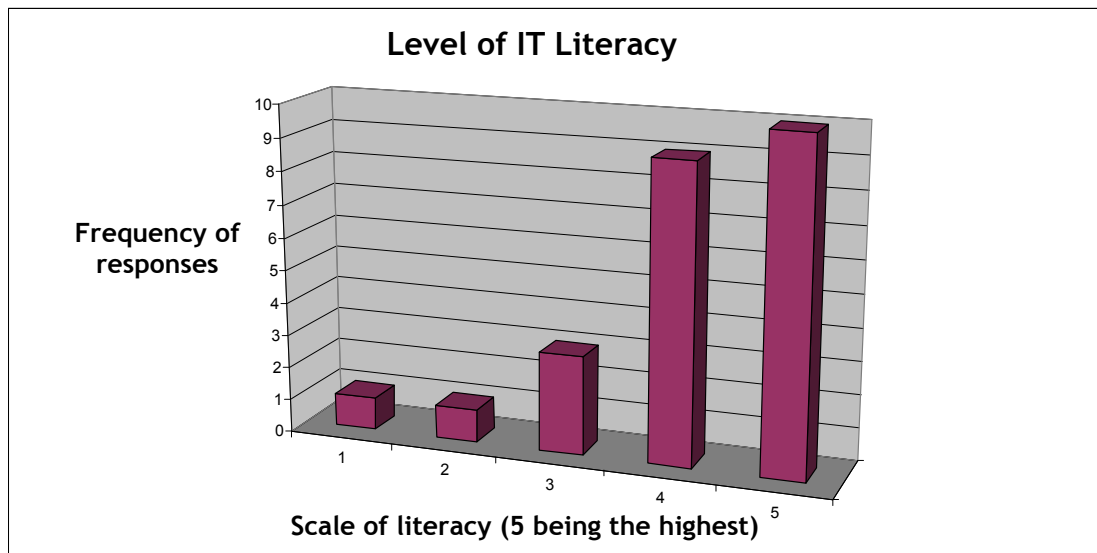


Figure 3: Level of information technology (IT) literacy frequency of responses

With 79% (19) of respondents rating their level of IT literacy at either 4 or 5, the data shows that the barriers to utilising the capacity and demand tools are not necessarily linked to levels of IT capabilities.

However, when asked if *further training in understanding data alongside the capacity and demand training would have been helpful* 50% (13) responded Yes with a further 29% (8) Not sure, indicating an

understanding of data is a potential barrier to utilising the tools, as opposed to the level of IT literacy.

Looking at the context of the provision of training, when asked *if more examples of the tools applied to your service* would have been helpful, 67% (18) responded Yes with a further 21% (5) Not sure. This is supported by the results from the question asking whether *this form of training should be provided on an individualised basis; larger mixed groups; doesn't matter either way; or not sure* (figure 4):

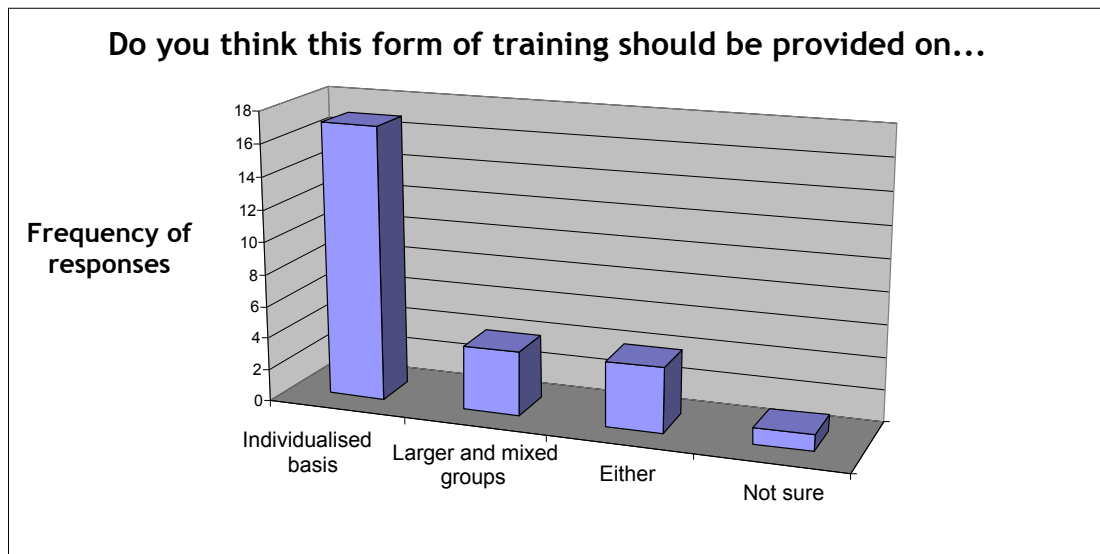


Figure 4: Frequency of responses to how this form of training should be provided

There are several limitations to the survey process which need considering when evaluating the results and findings. There were a small number of returns. The analysis and findings from these responses needs to be presented with a caveat identifying the issues of statistical validity when looking at such a small sample group. Ideally, this analysis needs to be extended to ensure more valid results. There was also up to a two year gap between the provision of the training and the survey being issued to the delegates. Some respondents understandably found it difficult to “place” this particular training, as they had attended a number of different workshops during that period.

Where respondents had completed capacity and demand studies in several areas, the survey provided no opportunity to quantify the different levels of difficulty met in each of those areas. It assumed, in its structure, that the level of difficulty in applying the tools remains the same, regardless of which service is being tackled. Further development of this aspect would be required to truly understand the differences between different arenas of application.

Conclusions to inform the action research project:

Robson (2002, p30) states that *‘the outcome of an action follows from mechanisms acting in particular contexts’*. Analysis of the survey responses identified three potential ‘mechanisms’ that are limiting the application of the tools back within the workplace:

- Information mechanism - information is too complex; access to information is limited
- Needs and expectations mechanism - no time, is seen as extra work; do not see its benefits
- Accessibility mechanism - did not understand the tools or their application

The preferred delivery of this training is on an individualised basis. The majority of which is within secondary care, although both therapies and diagnostics have received the least application of these tools.

In order to validate the findings from the questionnaires and to further develop the Skills4Change programme, the learning from these processes needed to be tested in a practical environment. My concerns with the Skills4Change programme were its abstract focus. The use of an action research project to test the above findings would provide some practical action to its theoretical meaning.

In summary, my growing concern as to the lack of demonstrable applications of capacity and demand, which I had taught across Wales, combined with the political focus on developing community services in Wales, led me to conduct the correlational survey with former training delegates. It was clear from the analysis of the questionnaires that providing the tools without the context within which to apply them distanced the delegates from their practical application. In order for teams to utilise the tools to make service improvements, and therefore maximise the effectiveness of the Skills4Change programme, a clear link needs to be established between the tools themselves and the delegates' experiences in the workplace: the tools have to have some meaning for them. I therefore concluded that an action research approach could be used to test ways of establishing these links. The barriers identified in the analysis were incorporated into the Skills4Change step approach adopted for the action research project. This focused on a Paediatric Occupational Therapy team within south Wales utilising capacity, demand and associated service improvement tools. My role was the external facilitator providing support to overcome the identified barriers to implementation.

The step approach was developed within the Skills4Change programme through a review of the existing literature on managing change within the NHS, which is explored at the beginning of the following chapter. This chapter then examines the methodology used in the testing of these research findings. It outlines the three phases of the action research project and how the data was collected and analysed.

Chapter Two: Aims, Objectives and Methodology

This chapter positions the research in terms of current literature on service improvement and change management. It outlines and explores the methodology used in the testing of the research findings from the questionnaire analysis of former training delegates. A history of action research is examined alongside its advantages; disadvantages and ethical considerations when employing this approach. With regards to this project, an outline of the three phases: Orientation; Data collection and Changes Implemented are provided, with an explanation of how the data was collected and analysed.

Understanding of patient flow within healthcare has its basis within industry through the use of tools such as the Lean Thinking (Womack and Jones 2003) approach to reducing waste from the Toyota Production System, the Six Sigma (Pyzdek 2003) approach to reducing variation from GE and Motorola, and the Theory of Constraints (Goldratt and Cox 1992) focusing on identifying and managing constraints within a system. Following the publication of the NHS Plan in 2000, the National Co-ordinating Centre for NHS Service Delivery and Organisation (NCCSDO) were commissioned to undertake a review of change management evidence. The subsequent publication of two documents under the series heading *Managing Change in the NHS* provided a ‘*practical learning resource*’ (NCCSDO 2001 paper 2 p2) which outlined a number of approaches to change management, and their applications to date in the NHS. Highlights from these papers include outlines of Soft Systems Methodology²⁰; Process Modelling²¹, which is included in the Theory of Constraints; Total Quality Management and Business Process Re-engineering²². The redesign approaches adopted in the early Modernisation Agency programmes used a combination of these

²⁰ See Glossary, page 11.

²¹ See Glossary, page 11.

²² See Glossary, page 9.

techniques (for example the Booked Admissions Programme and Cancer Services Collaborative). A focus on analysis of capacity and demand of service provision was taken forward in England by Kate Sylvester's and Richard Steyn's work on capacity, demand and carve-out, particularly through the Endoscopy Programme. The final publication of the 10 High Impact Changes (Modernisation Agency 2004), particularly *Change 9: Optimise patient flow through service bottlenecks using process templates* and the Improvement Leaders Guides (Modernisation Agency 2005) provide a detailed step by step account of how to redesign your service with these tools. These programmes, whilst advocating a bottom-up approach to change management, originated from a top-down, heavily politicised approach to service improvement within the NHS. In the United States of America the Institute for Healthcare Improvement used the PDSA form of action research to fuel its Breakthrough Series collaboratives (www.ihl.org). This ensured a powerful bottom-up approach to change.

Effective change was implemented in USA and England, but focused largely on administrative processes as opposed to clinical practice. The shift towards utilisation of the Lean Thinking (Womack and Jones 2003) methodology reflected a move to looking at clinical processes to maximise patient/clinician time. This also reflected a move away from clinic and theatre focus of previous service improvement programmes, and onto the wards with the launch of Transforming Care at the Bedside by the Institute for Healthcare Improvement and Releasing Time to Care by the NHS Institute for Innovation and Improvement.

The learning from these programmes combined with the Skills4Change teams' experiences of service improvement techniques employed within industry, resulted in the development of a step approach to change with a number of key tools and techniques from each methodology utilised. This ensured acceptability of the programme across NHS

Wales, as a number of NHS Trusts had already by this stage announced their allegiance to a particular methodology.

The importance of the human dimensions of change management have been outlined by William Bridges (2003), where he recommends small step change to ensure a smooth transition through what he terms '*neutral zone*' (2003, p34). This is supported by the seminal work by Langley et al (1996) in their development of the PDSA cycles of improvement which builds on the basis of Action Research.

The culmination of learning from these sources has identified the main characteristics to ensuring sustainable improvement: empowerment of front-line clinical staff making changes within their services, informed by measurement. This project focuses on how the Skills4Change programme can be developed to enable the above.

Aim and objectives:

The aim of this project is to develop an approach to training that could be applied across the NHS in Wales to increase understanding at a local level of capacity and demand interactions. Within that this project has three objectives:

1. To develop and validate an action research approach to providing tailored capacity and demand training for service providers.
2. To identify service providers' further training/skills needs to support capacity and demand locally.
3. To utilise learning from the above objectives to further refine the Skills4Change programme.

Through the background study on former capacity and demand training delegates, the barriers to the utilisation of the tools have been identified. The next step is therefore to look at the step approach used by the Skills4Change programme through an action research project. This will identify what are the realities of the service making the changes and what happens to individuals throughout that process. This learning will inform recommendations for the further development of the Skills4Change programme.

Methodology:

Crotty (2003, p2) presents us with four questions or elements of the research process which I aim to address in the following sections:

*‘What methods do we propose to use?
What methodology governs our choice and use of methods?
What theoretical perspective lies behind the methodology in question?
What epistemology informs this theoretical perspective?’*

The quantitative correlational survey conducted in the background to this research provided limited answers to a highly complex area. This positivist approach recognised that the tools cannot be reviewed in isolation. It is the interaction of the elements, i.e. the project or change team; the tools and myself as a practitioner, which required examining. This could only be addressed with a qualitative analysis. I wanted to examine what is going to make a change mentally for me as the researcher but also for practice in the real world. This became a piece of practitioner research, looking at praxis rather than practice. As such the methodology of action research was chosen, which is described by Gomm (2009, p4) as *‘Making some real world intervention and studying the results of this’*.

The theoretical perspective for my approach to action research is participatory. I believe the only way to bring about change in practice is through an emancipatory approach. The overarching epistemology for this study is ‘Realist’ in Robson’s (2002, p30) definition, as it is dealing with value judgements, real world practice and changing behaviour.

Whilst facilitating the action research project I positioned myself as participant observer, which required as Cardigan (2007, p148) states, *‘both personal involvement and detachment’*. This project reflected

upon how personal practice and understanding of the wider situation to bring about sustainable change can be improved. As a qualitative study the action research approach was adopted to incorporate reflective learning and therefore development of theory as opposed to theory testing, as Henn, Weinstein and Foard (2006, p150) state:

‘Theoretical ideas develop from initial data collection and then go on to influence future data collection - there is a cumulative spiral of theory development and data collection.’

This spiral development is a main characteristic of action research. It has been defined in a number of ways over its history since it was first described by Kurt Lewin in 1947 as a spiral process of exploration, planning, action, reflection and revision to inform further development. In 1970 Robert Rapoport added the element of joint collaboration within a mutually acceptable ethical framework. In 1988 Kemmis and McTaggart (1988, p6) outline action research as *‘trying out ideas in practice as a means of improvement and as a means of increasing knowledge’*. Waterman (2001, p11) summarises this in 2001 as:

‘Action research is a period of inquiry, which describes, interprets and explains social situations while executing a change intervention aimed at improvement and involvement’

In general it is an '*emergent*', '*iterative*', '*pragmatic*', '*participative*' and '*reflective*' (Earl-Slater 2002, p133-134) process which involves a spiral of action and research cycles, each linked; the learning from the first cycle informing the next and so on, as illustrated in figure 5:

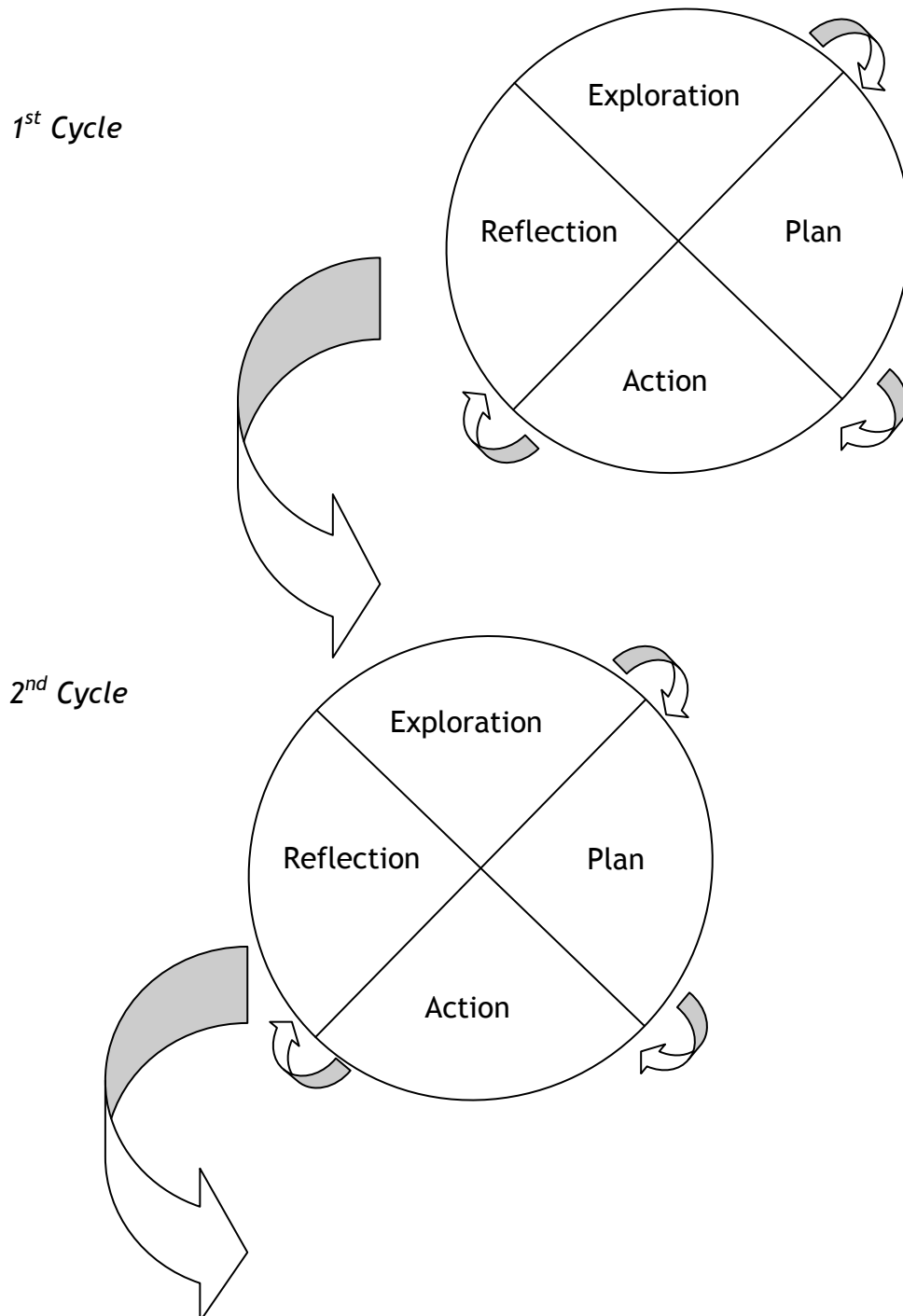


Figure 5: Spiral of Action Research Cycles (amended from Earl-Slater 2002, p133)

Earl-Slater (2002, p133) titles the first stage of the action research cycle: *'Reconnaissance: an exploratory stance is adopted, where specification and understanding of the problem is developed'*, however I felt the term "Exploration" described the stage in this action research project more appropriately, hence the above amendment.

This outline of action research illustrates the main areas this project investigates: change intervention and improvement through involvement. This aligns with the PDSA (Langley et al 1996) approach utilised and promoted by NLIH within all their service improvement programmes.

Action research has been widely used within the health service as it examines the theory-practice gap. It supports developing professional practice and testing improvements to patient services in a collaborative approach. Examples of its application in health care range from studies on patient information; patient compliance with medication; to developing nurse-led clinics; cancer pathways and reducing medication errors (Earl-Slater 2002). Whilst its application is widely employed, there are limitations to action research which need to be taken into consideration at the outset. Ultimately, there are no variables controlled within this approach to research, as it takes place within a social setting which is subject to continual change from outside influences. There is also the threat of the lack of impartiality on the part of the researcher and the lack of rigour commonly displayed regarding methods of data collection and analysis. To counter this, the researcher needs to consider and make explicit their role in the research. This ensures any presentations of opinions, viewpoints and inferences are open to critique. It is essential that a rationale is provided for all samples; that all changes claimed are supported with data and all presentations of data are contextualised. The focus on practice does not supersede the need to produce knowledge and without rigorous evaluation, change is not a proven improvement.

Action research is also a heavily resource-intensive approach as it requires reflective staff time outside of the meetings. It is therefore common to underestimate the time required for an action research project. Throughout NLIAH's programmes I have experienced this first-hand. I understand the need to "front-load" change programmes with communication, clarification of roles, requirements and scope. By keeping to the PDSA, small-step change approach, results should be seen quickly, which ensures interest and momentum is maintained.

Ethical issues:

An initial investigation into the ethical requirements for the action research was to use the Bridgend, Neath Port Talbot and Swansea Local Research Ethics Committee Checklist for Researchers. This covers the participating organisations. This poses whether the study will affect the treatment or care of patients; cause staff/patients distress; has consent of those responsible for the care of the patient and finally use of confidentiality when dealing with patient identifiable information. As this project mainly focuses on the practitioner, it does not intervene with the majority of the elements outlined above. The issue of potential staff distress is explored in more detail later in this section.

A wider investigation into ethics requirements led to the NHS National Research Ethics Service guidelines on what is appropriate or inappropriate for submissions to Research Ethics Committees where according to the criteria, this study falls into the category of 'service evaluation' and therefore did not require formal ethics committee approval (*Appendix 2*).²³

Whilst formal approval may not have been required, certain elements still needed to be taken into consideration, particularly when undertaking an action research study. As summarised by McNiff, Lomax and Whitehead (1996) access needed to be negotiated with the service managers, the process outlined and boundaries agreed. The team needed to be assured of confidentiality and the right to withdraw at any stage. At the outset of the project, the boundaries and expectations were made clear to the participants/co-researchers, and indeed throughout the study their right to withdraw at any stage was reinforced. The team received regular feedback to inform these decisions.

²³ This piece of research was scoped in 2005/2006. Further advice from Middlesex tutors led me back to the LREC in 2008, who advised that it may have required a REC opinion, but that it would have been a favourable ethical opinion.

Diener and Crandall (cited in Bryman 2004, p509) outline four main areas regarding ethical principles in social research:

- *‘Whether there is harm to participants*
- *Whether there is a lack of informed consent*
- *Whether there is an invasion of privacy*
- *Whether deception is involved’*

‘Harm’ can refer to not only physical considerations, but also psychological and emotional:

‘While physical harm may not be intended within a research design, psychological harm may arise at any time through the investigation of sensitive issues that may induce stress or anxiety.’

(Henn, Weinstein and Foard 2006, p178)

In this particular instance, consideration needed to be given to potential effects on the participants’ career development. Maintaining confidentiality of records is important to protect the participants from some potential “harms”, however there are issues in employing this in qualitative research as individuals can often be identified by virtue of the scale of the research. This was the case in the action research project, which worked with a very small team. This issue was made clear to the team at the outset as part of gaining their ‘*informed consent*’.

The concept of ‘*informed consent*’ within an action research project requires continual reiteration, as participants and researchers alike become ‘*informed*’ through the actual research process itself. Cycles develop and the journey of the research may alter from the initial plan. An understanding of professional morality, transparency and the team’s ownership of the project as it evolves are essential to counter these issues.

'Invasion of privacy' is linked closely with *'informed consent'* as this has been surrendered to a certain degree by participation in the research. It needs to be considered further in this action research project with regards to the recording of reflective logs, feedback and shadowing sessions. It is essential in any research situation, but particularly in a small scale action research project, that a level of trust is built with the participants *'to promote debate and development of knowledge'* (Walliman 2005, p336) and so accurate descriptions of all information obtained were validated with participants. Any observational data was shared with participants for comment and contextualisation throughout the project. It was clarified with the participants that they had a right to record only what they wanted to share, and shadowing notes would be checked with them prior to inclusion in meeting discussions.

With regards to *'deception'* consideration was given as to whether this research had been presented as something else: was there a hidden agenda. The action research project encompassed a highly politicised area: funding for additional staff and waiting times targets. I ensured that these issues were discussed in the open at the initial scoping meetings, and the participants were clear as to the purpose of the research. As Bryman (2004, p518) states:

'Gaining access is also a political process. Access is usually mediated by gatekeepers who are concerned about the researchers' motives, what the organization can gain from the investigation, what it will lose by participating in the research in terms of staff time and other costs, and potential risks to its image.'

These issues were discussed at the initial meeting with the Heads of Service and the Planning Department managers. Inclusion of the Planning Officer within the project team dealt with the internal politics of reporting progress, ensuring access maintained, and openness was assured. As I had worked previously with the Planning Manager I was

personally assured of non-interference from senior management and support for agreed principles of openness and equality amongst the project team.

As my role within this study falls within the '*outsider*' (Titchen and Binnie 1993, p859) model of action research it required additional elements of consideration. Titchen and Binnie (1993, p859 - 860) outline four main tensions within this model:

- Potential lack of ownership and therefore threat to sustainability as participants may view the '*outsider*' as responsible for initiating change;
- The '*outsider*' does not have any authority over the setting, and cannot alone overcome organisational barriers to success;
- There is potential for a clash of priorities as participants' focus for change may differ from researcher's area of study;
- With limited influence and authority on the part of the '*outsider*', resistance to change may be insurmountable.

The latter two of these tensions forms a large part of the research itself: the interaction and these barriers. The first tension was overcome by a continual reinforcement of the action research approach; as bottom-up, collaborative and participatory. The second tension Titchen and Binnie overcome with development of a '*double-act*' (1993, p858) model, utilising a close researching relationship with an '*insider*' (1993, p859) with authority over the setting. Whilst this was not fully employed in this study, I worked closely with the Therapies Manager, and also with the Planning Project Manager who had strong Trust Executive Support.

The aim of research is to gain greater knowledge and understanding, but as Walliman (2005) further notes, consideration needs to be given to what may be done with the knowledge gained, and what may be

uncovered. A risk analysis was conducted to explore areas of ethical and political risk and countermeasures that will be employed to reduce their potential impact (*Appendix 3*).

Method in action:

The action research project was planned as a three phase approach. It followed an exploration of the systems and processes in place within a small service team²⁴. This informed an understanding of the capacity and demand interactions within that service. From this an action plan would be developed and improvements to the system tested.

The three phase approach employed was informed by Ong and Humphris (1991) guide to the steps in conducting rapid appraisal. Rapid appraisal is an essential technique where the action researcher fulfils the 'outsider' model as explored by Titchen and Binnie (1993). As an 'outsider' understanding of the processes, structures, values and principles of a service is limited at the outset. Rapid appraisal enables 'swift assessment of local views and perceptions of problems and needs' (Bowling 1997, p370). The phases were: *Orientation*; *Data Collection*; and *Changes Implemented*. The *Orientation* phase of the project covers who and how the team were selected; how ethical issues were addressed and the initial scoping of the project. The next two phases, *Data Collection* and *Changes Implemented*, formed the main cycles of the study, within which were a number of smaller micro-cycles.

²⁴ The service team consisted of one Head of Occupational Therapy; two Paediatric Occupational Therapists; one Technical Support Worker; and two Administration Support Officers. I was assisted by the Planning Officer from the Trust who represented the Senior Management Board and reported on the project to the Executive Team. The entire team were white females.

Orientation phase:

The action research project focused on a Paediatric Occupational Therapy team on one site of a split-site NHS Trust in South Wales. This project area was selected as follows:

- Initial awareness sessions of tools of service redesign, focusing on waiting list management and capacity and demand analysis were presented to the three Therapy Networks across Wales.
- The Planning department within one South Wales Trust approached the Service Improvement team within NLIAH. They requested our support with a redesign project within Therapy services in order to achieve Access 2009 targets.
- A meeting was held with the Heads of Therapies and Planning Department, at which the proposed action research project was outlined, and how this informed part of the overall development of the Skills4Change programme. It was agreed that the Paediatric Occupational Therapy department would pilot this approach. Findings and a validated tool would then be rolled out to the other Therapy areas.

Issues regarding the attainment of *informed consent* throughout the project have been previously discussed. Attendance at meetings; the completion of reflective logs and feedback forms, and participation at each stage within the process was open for negotiation with the members of the team.

The initial scoping or problem identification, took place with the Heads of Departments, but the subject was still too broad. The focus of the service managers was largely on increasing staff numbers. A detailed justification was required by the Planning Department with redesign as the key enabler to meet Access 2009 targets.

Data Collection phase:

Described in the cyclical stages of service improvement outlined by Langley et al (1996) and translated into the spiral of action research cycles, as outlined by Kemmis and McTaggart (1988), the larger *Data Collection* cycle was as follows.

PLAN:

Gain a picture of the service

Get the participants to understand the picture of their service

DO/ACT:

Hold scoping meetings

Walk-through the process with key individuals

Process mapping session

Capacity and demand analysis

STUDY/OBSERVE:

Feedback findings to participants

Facilitate participants identifying areas for improvement

ACT/REFLECT:

Start to action plan changes

Of the range of activities to generate information within this larger cycle, three of the smaller micro-cycles are outlined in figure 6:

	CYCLE A	CYCLE B	CYCLE C
PLAN	Clear aims and objectives at the outset.	Scoping meeting to capture initial picture of service.	Complete the picture of service with those who could not attend scoping meeting.
DO/ACT	Manager outlined aims and objectives.	Semi-structured open forum at beginning of project with the majority of the team.	Met with booking staff and scoped patient flows.
STUDY/OBSERVE	Assumed manager would be objective but in fact a highly subjective presentation was given. Number of different aims and objectives in the room. Confusion as to the purpose of the project.	Needed to follow up with individual meetings with those who could not make the scoping meeting. Different pictures presented by individuals and the team as a whole.	Contradictory picture of patient flows; service provision and problems emerging.
ACT/REFLECT	Clarification was needed. “Quad of aims” ²⁵ (NLIAH 2006, p19) tool utilised to facilitate team setting the aims and objectives of the project.	Revisited picture of the service with entire team present to ensure one picture was agreed by all and avoid as much subjective interpretation as possible.	Resulted in revisiting each individual to walk through the process prior to the next meeting and subsequent process mapping session.

Figure 6: Three of the smaller micro-cycles in the *Data Collection* phase

²⁵ See Glossary, page 11.

Changes Implemented phase:

A number of changes were tested in this project. The larger cycle is described as follows:

PLAN:

Identify priority areas for change

Test changes monitoring results throughout

DO/ACT:

Booking process redesigned

Referral review meetings held

Review patient information and correspondence

Implement agreed care package approach

STUDY/OBSERVE:

Waiting times reduced

DNAs reduced

ACT/REFLECT:

Additional staffing support provided to team as identified by the capacity and demand study

Continuous improvement culture has emerged

I stepped out from the project during the *Changes Implemented* phase. A following meeting with the team was held a year later. All team members had become empowered to continually assess; innovate and improve their service. They were examining areas for improvement where their work overlapped with other services. Examples of this are the Occupational Therapists reviewing their joint clinics with Physiotherapy, and the Administrative Support Officers planning the spread of the administrative changes to other service areas they supported. It was clear therefore that a continuous improvement culture had emerged.

Collection and analysis of data:

Transcriptions of sessions were considered at the design stage of the project to ensure a true reflection of each session was captured and therefore rigour promoted. This approach was not utilised however in order to create the existence of as normal an environment as possible. This positioned my role as '*Participant as Observer*', as outlined in figure 7 showing the participation and observation continuum (Junkers 1960, p146):

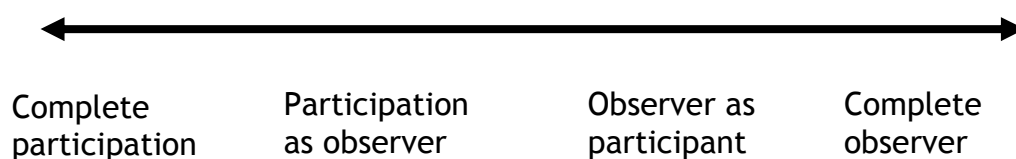


Figure 7: The Participation and Observation Continuum (Junkers 1960, p146)

In the action research '*Participant as Observer*' model it is difficult to maintain absolute rigour as you are unable to tape all interactions, or note every conversation or meeting as it would interrupt the "natural" flow of information. Instead the use of questionnaires at the end of each of the sessions to promote the participants' reflections and the circulation of high level notes of the meetings to all participants aimed to counteract this potential lack of rigour.

Data was therefore collected in a number of ways during the action research project. Feedback questionnaires were completed by each member of the team after each session or meeting. Reflective logs were kept by voluntary members of the team. I also kept a reflective log throughout the action research project. Lastly, at the final meeting a "feelings feedback" session was facilitated, where team members were encouraged to reflect on the whole of the project and how they

had felt at key stages. Copies of this feedback are included in the appendices (*Appendix 4*).

Analysis of this data utilised a combination of quantitative and qualitative methods. A small number of questionnaires from each of the meetings can be analysed quantitatively as they asked for participants to scale their understanding of each tool and purpose of the meeting. The reflective logs, free text comments from the questionnaires and the “feelings feedback” were coded and organised into a coding framework. This framework utilised the barriers identified during the background stage of the project as the overarching high level categories: Time was combined with Cynicism into the high level category titled Realism; and the Understanding of tools and Information being too complex (see **Conclusions to inform the action research project**, p 34) were combined under the title External Support.

The Skills4Change programme includes a section on the human dimensions of change. It draws heavily on William Bridges’ Model of Transition (2003) to explain the phases encountered in any change project. As the action research project evolved I recognised patterns from the Bridges’ model emerging. From the patterns of language being used in the meetings, and from the reflective logs, I developed a theoretical timeline of the coding categories already identified. At the end of the project I planned to transpose the full analysis of all reflective logs upon this timeline.

Additional categories emerged from an heuristic analysis; which as West (2001, p129) outlines, includes data not only from what the researcher sees and is told, as with grounded theory, but ‘*all aspects of the research experience, including the researcher’s inner processes*’. A grounded theory approach was not employed as I was concerned that I would be losing the ‘*holistic totality*’ (West 2001, p128) provided by

what Polyani (cited in West 2001, p129) refers to as my '*tacit knowledge*': an understanding that I know more about the phenomenon of change management than of which I am conscious. The '*immersion*'; '*incubation*' and '*explication*' stages of heuristic research outlined by Moustakas (cited in West 2001, p129) enabled me to explore the data more fully utilising my own reflection and learning.

The following chapter examines these findings in more detail: focusing on the realities of making changes as well as the reactions encountered and experienced throughout those changes.

Chapter 3: Findings

This chapter outlines the findings of the action research project; focusing on two elements: the realities of the service making the changes; and people's reactions through those changes. This is explored through the analysis of the reflective logs recorded by the project team members as well as myself, which are transposed onto Bridges' Model of Transition (2003), identifying the various stages of transition and change the team were experiencing.

In the action research project, as a practitioner, I witnessed the two sides of service improvement training, which has informed the development of the Skills4Change programme. The Skills4Change programme involves mixed service cohorts given the tools of problem-solving and redesign, using a six week break between the workshops to apply to a project to find the root cause, and then implement solutions following the second workshop. A schematic of this programme has been included in the appendices (*Appendix 5*). The action research project looked at a local team working through an approach developed in the project planning stage, to understand their capacity and demand. This provided me with an insight into the "other side" of the Skills4Change programme; the meaning in action and therefore provided key learning to develop the programme further.

There were two sets of outcomes from this action research project which can be used to inform the development of the Skills4Change programme:

- The realities of the service making the changes
- People's reactions to what happened when they made the changes (including my own)

These findings were developed from the analysis of the feedback forms, notes and observations from each of the action research sessions (outcome 1) and analysis of the reflective logs (outcome 2).

Realities of the service making the changes:

Arising from the analysis of these questionnaires (Appendix 6), notes from the meetings and observations, there are several key points which need to be emphasised within the design of a transferable package of capacity and demand training:

➤ *Presence of external facilitator is essential:*

The team stated on several occasions that there were huge benefits created by the presence of an external facilitator:

- *'It helps to have a "3rd party" to pinpoint problems and offer ideas';*
- *'The team have responded well to outside facilitation and I believe this has created an increased level of openness from both the staff and their line manager';*
- *'I feel an outsider is more effective as they have no knowledge of current dept/process and therefore may pick up on things someone internal may miss';*
- *'Have participated in several process mapping exercises but find it valuable to have an external 'facilitator' who does not understand/know the service as they are able to ask questions that reach the core of the problem'*

(Quotes from meeting feedback forms)

Benefits also included impartiality of the project; momentum; and confidence from the team that improvements would be followed through. External facilitation needs to be carefully managed however to ensure the benefits of staff empowerment are realised, and sustainability post-project is maintained.

➤ ***Individual communication to all team members prior to first team meeting:***

It was assumed that the purpose of this project and the approach that was to be taken would be cascaded from the managers throughout the team. This was not apparent at the first meeting, and halted potential early progress. Even utilising the cascade approach, there can be huge gains from the action research facilitator discussing the project with the team members individually before the first team meeting.

➤ ***Clear role definition at the outset by individuals:***

Role definition in this project was framed by the management team who described the Planning officer as representing the funding and the Facilitator as providing the evidence for the additional funding:

- *‘[Planning Officer] and I were put into distinct roles by [the Team Manager]; [the Planning Officer] as the one with the money, whom she had to convince that they needed more staff, and I as the one she would use to convince her’*

(Quote from my reflective log following initial meeting with team)

This external framing of roles needs to be avoided as much as possible, and at the outset individuals need to be clear on their roles to the rest of the team. Management involvement and influence in the aims of the project will be discussed in more detail later.

➤ ***Aims and objective setting - ensure they are formed by the team:***

At the beginning of the project, the aim and objectives were largely set by the manager and myself but this needs to be owned by the team. Whilst this was re-balanced halfway through the project, it needs to be established at the outset in the transferable model. The ‘quad of aims’ approach (NLIAH 2006, p19) focusing on Purpose, Customer Impact, Deliverables and Success Criteria provides a framework for this. It can then be revisited throughout the lifespan of the project to ensure not

only that the focus remains and scope creep is avoided, but also it can deal with group membership changes.

➤ ***Scoping/Service mapping meeting with whole team is essential:***

To understand the structure of the service; its strengths and weaknesses perceived by the staff, there needs to be a semi-structured open forum at the start of the project, which explores questions such as:

- What are the staffing levels?
- What are their individual responsibilities?
- What are the patient flows/clinics?
- Who are the referrers?
- What are the team members' non-clinical responsibilities?

This discussion should expand as the meeting progresses. It is crucial at this stage to identify what is important to the team; what are the types of daily problems they face; and most important to close with, what do they see as the positives of their service.

➤ ***Commitment to provide the time for the project:***

Time commitment was identified early on as a potential concern for the team, which has been supported by the analysis of the questionnaire section of this project. Fortunately locum cover was provided jointly by NLIAH and the participating organisation. This issue raised so early in the process, clearly highlights a key hindrance to the action research approach to clinical service redesign: the time commitment required from all staff, and its impact on the clinical service provision. A commitment and strategy to compensate for potential clinical time lost needs to be agreed with senior management at the outset.

➤ ***Process walk-through prior to mapping:***

The Improvement Leaders Guides published by the Modernisation Agency (2005) outline the importance of talking to staff prior to holding a process mapping session. This ensures they feel involved in the session, and the guides suggest walking through the process post-mapping to ensure you have captured all the information. I found walking through the process prior to the mapping session is extremely beneficial to the facilitator, as it enabled me to focus the group during the process mapping and ensure reasons for complex areas are understood by all.

These elements are included in the transferable package of training in the appendices (*Appendix 7*).

People's reactions to what happened when they made the changes

The reflective logs were analysed using coding themes which were developed into a coding framework, as outlined in Chapter 2: Collection and analysis of data. The categories developed from further analysis of the data were Time; Cynicism; Emotional Stress; Physical Pain; Confidence; Emotional Value; Leadership; Ownership; Policy and Strategy and Self-awareness. These could be grouped further under the headings Realism: Unease; External Support and Belief.

At the beginning of the project participants' language within their reflective logs focused on concern at the time commitment and realities of the project, with several references to unease, either emotionally, or in some extreme cases, physical pain: *'nervous'*; *'apprehensive'*; *'anxious'*; *'painful'* (Quotes from participants' reflective logs).

To counter this, when participants discussed the potential of the project, and looked to the future of the work they were involved in, the language chosen was more positive with references to belief and confidence and recognition of the importance of their emotional value: *'comfortable'*; *'valued'*; *'hopeful'* (Quotes from participants' reflective logs).

As the project progressed there was increasing evidence of the participants' self-awareness, and self-development, in some cases challenging and questioning their own behaviour: *'struggling to change 19 years worth of practice'*; *'has been challenging for me'*; *'needs to be reinforced more strongly by me'*; *'gave me the chance to refocus my thinking'*; *'learnt some positive lessons'* (Quotes from participants' reflective logs).

By the end of the project, all participants demonstrated awareness in their reflective logs, of how this project would impact upon other areas

in which they worked, or had influence, by changing or altering their perception of problems and their abilities to develop and implement solutions. This was particularly demonstrated in the administrative support's log who oversaw other sub-departments of Occupational Therapies referrals and booking systems: *'I believe there are many aspects that could be developed and introduced across the Occupational Therapy Outpatients Service'*; *'a most beneficial and educational experience'* (Quote from administrative support's reflective log).

The participants moved through the categories as through a timeline for the project, as outlined in Chapter 2 and verified by further analysis of the reflective logs (*figure 8*):

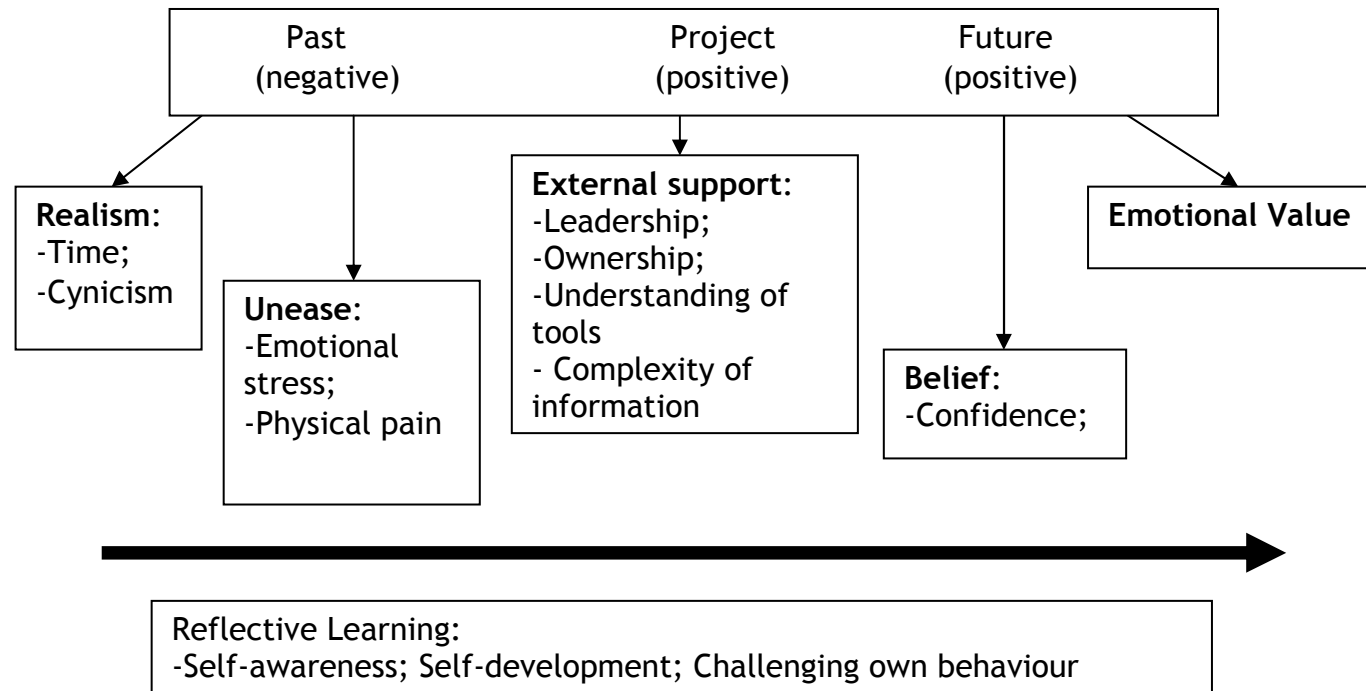


Figure 8: Coding framework reflected in project timeline

It is clear therefore that the transferable package of capacity and demand training, developed through the action research approach, cultivated empowered staff. By examining purely the language of the department manager within her reflective log a shift in ownership is demonstrated. The move from a dynamic, almost forceful choice of words, where she was pushing the staff forward: '*fired*' and '*pro-active*' at the outset; through the mid-project blues: '*stagnating at the moment*'; to the final stages where she was more passively witnessing her staff's empowered actions and responses: '*she is really pleased*'; '*she is really positive*'; '*staff really like it*' (Quotes from manager's reflective log). One of the team's reflective logs is included in its entirety in the Appendices as a sample (*Appendix 8*). I have cited from all of the reflective logs recorded by the team to ensure a balanced representation of the data.

The timeline evident in the logs can be transposed onto Bridges' Model of Transition (2003), where he describes change as the external, situational process projects go through, and transition as the internal, psychological process people experience during change (*figure 9*):

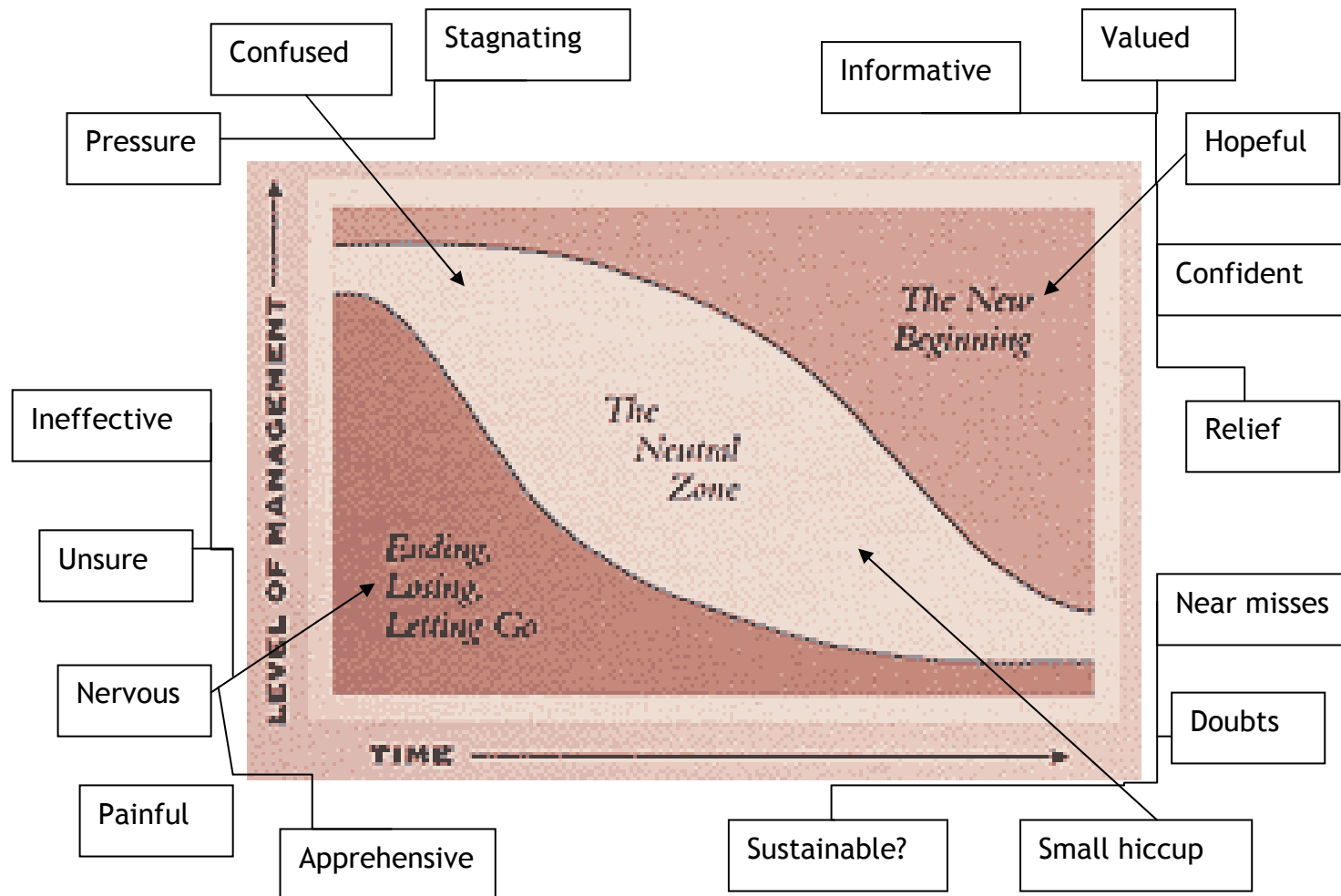


Figure 9: Bridges' Model of Transition (2003, p70) with reflective log comments marked along the timeline

The reflective logs illustrated the psychological transitions each of the team members were experiencing throughout the lifespan of the project. Early on, the level of input and leadership required from the manager and myself were high, but as the project progressed, and the team overcame what Bridges' terms as '*The Neutral Zone*' (2003, p34), and breached into '*The New Beginning*' (2003, p50), the teams' ownership and leadership of the project took over as they became more emancipated.

An analysis of my reflective log supports this shift centring on the concept of Tensions throughout the project, such as:

- Manager's presence affecting team's openness:
'The mood shifted, although not dramatically, and you could tell that although there was a good, open relationship between the staff and [the Manager], they became less engaged.'
 (Quote from my reflective log)
- Manager's positioning of my role as justifier for extra funding
- Being caught between implementing policy solutions and total empowerment of staff to find own solutions:
'spent some time first unpicking the complexities I had just been led through. I will talk [the Planning officer] through the above concerns, but will not share this with the team, as they need to come together to realise this themselves - hopefully at the process mapping session. I need to be clear that there are some policy processes which need to be followed which will help with some of their inefficiencies (DNAs etc.) but need to sell it in a non-policy way!'
 (Quote from my reflective log)
- Leadership and ownership:
'when issues were being discussed [the Manager's] deputy began looking at me for support and confirmation instead of [the Manager]. This highlights one of the problems I can see developing - ownership and a clear lead for the

project. Whilst [the Manager] took over making the annotated changes to the letters etc. it is clear they are looking to me to lead'
(Quote from my reflective log)

- Moral provision of care and policy of discharge after set package of care
- Standard time allocated to each patient as opposed to child's pace of development²⁶:
'Capacity and demand at this point seemed very cold and clearly at odds with the service provision to me. I had a real glimpse of how frustrated the OTs must feel as I present the calculations and process in simplistic terms without the moral issues to cloud the concept'.
(Quote from my reflective log)
- Individual patient requirements and wider society's requirements

At the outset my reflective log focused on a factual recording of events as opposed to what these events meant, and did not explore how the participants' and my internal processes were reflected in their reactions. This slowly shifted to an identification of the more human dynamics of the changes being made as opposed to a process of capturing information. This reflects the mental progression I was undertaking, moving from a focus on tool and techniques to a comprehension of the context surrounding the tools: process orientation to context orientation, managing to leading.

If this is juxtaposed with the concept of Tensions explored above it demonstrates the transition between the comfort zone and the new beginnings, explored by Bridges (2003). I used the word '*comfort*' several times throughout this shift, mainly as a reflection on myself: '*comfortable with me*'; '*not comfortable with what I'm presenting*'

²⁶ Appointment lengths need to be flexible to a certain degree, influenced by the attention span and therefore potential pace of development of the child.

(Quotes from my reflective log). This demonstrates an understanding of the delicacy of the participants leaving their comfort zone, and how I delayed this purposefully to ensure all were ready. It also shows an awareness of how I am intrinsically involved in this shift: my role as transitional lead. This was closely linked with the terms '*confidence*' and '*stressed*' in my reflective log which illustrates my apprehension in my ability to support the team through this testing time. The next meeting's reflections were far more positive as I contemplated upon changes within the team members' outlook, using their words: '*looking at things in different ways*'; '*taking a more long-term view*' (Quotes from my reflective log). This demonstrates a clear shift of another tension occurring during the project timeline: management of short-term issues towards long-term planning.

In summary, the findings from the action research project outlined a number of key elements to be taken into consideration when further developing the Skills4Change programme. These mainly focused on balancing the importance of ensuring clear ownership of the project remains within the team, with the benefits of external support to maintaining momentum, confidence and clear direction for the project. If this is positioned against the findings from the reflective log analysis and its transposition on Bridges' Model of Transition (2003, p70), it is clear how this 'empowerment with support' model is essential to not only the physical change process, but also the psychological transitional process teams will be experiencing.

The following chapter draws together the findings from the initial piece of questionnaire research with these conclusions. It provides some recommendations for the further development of the Skills4Change programme, as well as the wider cross-directorate working for NLIAH, whilst positioning the learning gleaned from this project in terms of the current literature, as well as my own personal journey of learning.

Chapter 4: Discussion and Recommendations

This closing chapter draws together the findings from the action research project with the initial assumptions of the overall research. It addresses the aim and objectives outlined in chapter 2 concluding with recommendations for the further development of the Skills4Change programme. These recommendations focus on three key elements: the use of the *'Insider/Outsider'* model (Titchen and Binnie 1993); the importance of empowerment with support; and lastly the benefits of organisational and service specific delivery. This chapter concludes with a recommendation for NLIAH and the Skills4Change programme in particular, to focus more on the context of delivery; i.e. organisational culture, and less on the tools and techniques themselves. This would ensure all aspects of NLIAH support are integrated to provide more efficient and effective service improvement support.

There are a number of key points of learning that have arisen from using the mixed method designs: quantitative study and qualitative participatory action research. With regards to the quantitative method, particularly survey research, I learnt the importance of simplistic language and timeliness in respect of the training you are evaluating. Most importantly, I underestimated the complexities of the applications of the tools: the numerous variables which could affect their sustainability and spread. Interviews may have been more appropriate as they would have captured more depth. This demonstrates the importance of experience and meaning in action of these tools and their application, as opposed to aiming to quantify their applicability in numbers.

With regards to the action research project, I learnt that more rigour in design of the data collection processes were required. Whilst notes were taken from the meetings, the language of the contributions from

each participant was not captured, and therefore opportunities for additional analysis missed. As I have mentioned earlier with regards to adopting the '*Participant as Observer*' model (Junkers 1960, p146) direct transcriptions of the meetings was avoided purposefully to encourage openness, however, on reflection more could have been done to bridge this gap. With regards to the reflective logs, these were completed retrospectively by the participants, despite continual encouragement throughout the project. This could skew the data as different filters are being used by the participants at the end of the project, as experience alters perspective. The "feelings feedback" session reinforced this, as participants were encouraged to reflect on how they felt at the beginning of the project. More accurate and representative data would have been produced if the exercise was conducted at the beginning of the project in exactly the same way as it was at the end.

The assumption made by me at the outset of this project was that it was the tools and not the context of delivery or support that affected their application, and that this project would focus on development of the tools themselves. As with the Skills4Change programme design, this project centred on the mechanisms to the detriment of the context. I assumed that the action research project would discover more about how the tools required developing, building on the quantitative analysis of the questionnaires. On reflection, the move I made from the use of quantitative design to qualitative participatory action research echoed this shift. The quantitative survey concentrated on the practical application and physical evidence, whilst the qualitative participatory action research extracted experiential and emotional evidence. This resulted in the project focusing by default, more on context than mechanisms: largely the context of the team and my role within that.

The journey of my own personal learning that this project demonstrates is a shift towards the awareness of the importance of context: with an

initial focus on mechanisms resulting in a final exploration of context. The reading prior to the study was scoped at the use of the tools themselves and making them accessible, and so some of the knowledge regarding emancipatory approaches to change were not encountered by me at this stage, but have required revisiting during this learning process.

McCormack, Manley, Kitson, Titchen and Harvey (1996, p256) describe practice development as a '*continuous process of improvement and emancipatory change*'. They focus on culture and context with skilled facilitation required to achieve the emancipatory change through enlightenment and empowerment. This can be evidenced through the analysis of the reflective logs in the action research project. The evolution of practice development has resulted, McCormack et. al. (1996) argue, in a plethora of roles given this title with little thought to a framework of working. Practice development requires skills in change processes, research and evaluation techniques and methodologies and the confidence to use these within specific contexts. The Skills4Change programme has struggled, focusing on the tools training without context: not providing the skilled facilitation throughout to deal with, what Schön terms as '*messy*' (1991, p43) reality of practice. The tensions explored in the action research findings show how former delegates when attempting to utilise the tools with limited support and facilitation, confronted with these tensions, may feel that what they have been taught bears little or no resemblance to their working reality.

If we revisit the aim and objectives outlined in Chapter 2: Aims, Objectives and Methodology, these were achieved by the combined findings of the action research project and the questionnaire analysis in the following ways:

1. A validated, action research approach to tailored capacity and demand training was developed (*Appendix 7*).

The action research project raised self-awareness within the team; provoking them to challenge their own behaviour and practices as well as those of the wider team. It fostered a problem-solving approach, but it did not enable a team to conduct the capacity and demand analysis without the support from skilled facilitators and those with the data and statistics expertise.

2. This identified the further training or skills required to support capacity and demand locally, thus addressing the second objective.

External data analysis support was identified as essential in the reflective logs from the action research project. Another option would be for key members of the team to be provided with intensive data training.

A transferable package of capacity and demand training has been developed from this learning and has been incorporated into the Skills4Change programme. This requires skilled facilitation and support throughout the project. It aims to raise self-awareness in teams to challenge their own behaviour and foster a problem-solving culture, but not through the traditionally adopted approach within NLIAH of a rapid replication of capacity and demand analysis and use of change management tools.

3. From the two threads of this research project: questionnaire analysis and action research project, there are three elements which stand out and can be utilised to form key recommendations for future development of the Skills4Change programme:

- The importance and influence of the '*Insider/Outsider*' model (Titchen and Binnie 1993) employed in the action research project
- The value in the employment of the 'empowerment with support' model
- The focus of organisational and service specific delivery of training and its impact on sustainability

Two of the key recommendations concluded in this research are underpinned by the concepts of leadership and empowerment. Empowerment of staff requires a style of leadership that moves along the traditional continuum, away from control and command. This continuum from autocratic; through democratic to laissez-faire was summarised by Lewin and his colleagues (Lewin, Lippit and White 1939) during their 1939 social experiments. It is one which organisations and staff move through depending on situations in which decisions are to be made. It can be a spiral process, the shift towards empowerment building upon a succession of successful changes. This was evident in the action research project as the change in the staff's attitudes and the success of the implemented changes enabled the manager to move away from the autocratic end of the leadership continuum.

Kotter (1996, ix) states the '*engine that drives change*' is leadership. He outlines the differences between managing and leading as '*planning,... organizing ... and problem solving*' (Kotter 1996, p25) versus defining the future, aligning people with that vision and inspiring them to achieve it. As a practitioner I became aware of the maturing of my style from managing to leading as I moved from process orientation

to vision and context orientation, as evidenced in the analysis of my reflective log.

The concepts of transactional leadership and transformational leadership have developed over the past 20 years to differentiate between these roles. Transactional leadership involves direct authority, whereas transformational leadership relies on influence. Kouzes and Posner (1998) outline five key characteristics of transformational leadership: challenging the process; inspiring a shared vision; enabling others to act; modelling the way and encouraging the heart. Reflecting on the project I explored each of these throughout. The most challenging was balancing the enablement of the team and inspiring a *shared* vision with the need for a strong lead. In the early stages, a clear lead was required and it took some time and encouragement for the team to feel confident enough to take ownership and move forward alone; like taking the stabilisers off a bike.

Insider/Outsider model:

The power of the '*insider/outsider*' model (Titchen and Binnie 1993) employed within the action research project is in the three-tiered leadership perspective it provided to the staff involved in the front-line delivery of the service:

- The line manager provided a service managers' perspective, ensuring relevancy of the training; confidence in changes being trialled and opinions valued in the eyes of the front-line staff.
- The planning manager provided a wider organisational perspective linking with the executive team. This increased the validity and importance of the project and the service.
- Lastly, I provided a wider national and international perspective; increasing the confidence of the legitimacy of the tools, training and direction provided.

My role also allowed for balancing of potential conflicts between the individual service perspective and the wider organisational perspective.

Step two in Kotter's eight step process to leading change is to establish a 'guiding coalition' (1996, p57) with four key characteristics: 'position power'; 'expertise'; 'credibility' and 'leadership' (1996, p57). The three-tiered approach outlined above incorporated these characteristics effectively. The revisit to the project a year later, which found changes to be sustained and spread to other areas of the staff's influence, illustrated the success to which this had been achieved.

‘Empowerment with support’ model:

Historically, NLIAH (and liC) have provided this training in isolation of further facilitation, in the belief that empowerment of individuals to change the service in which they work can be inspired by providing them with the tools. Results from the questionnaire section of this research identifies that this is not necessarily the case, which raises two questions: why is facilitation required to move changes along; and how do you engage staff in this process?

The first question can be addressed by looking at the main element which was highlighted as a barrier in both the questionnaire responses and in the initial scoping meeting with the action research team: time commitment. From a practical point of view, the continuity of external facilitation underlines the importance of this work and the commitment to see it through. Whilst staff in the NHS experience increasing workloads with little recognition, they are understandably resistant to engaging in change projects, which often result in little effective change, as momentum and leadership are not maintained.

Another side to the requirement of facilitation is the historic hierarchical relationships encouraged within the public sector. Whether it is between a patient and a clinician; staff and the larger organisation; the organisation and the government, traditionally there has been a reinforcement of the parent-child relationship, with a top-down approach to management and information sharing. This has engendered a culture which requires “permission” to change. With the onset of chronic condition management utilising the patient as ‘*co-producer*’ model (Degeling, Close and Degeling 2006, p15), and the development of more devolved models of government, this is starting to change, however its embedment will take time to dissolve.

When identifying how to engage people in this process, it is dependent on their experiences, as explored in Connors & Smith's (2002) Results Pyramid (*figures 10 & 11*):

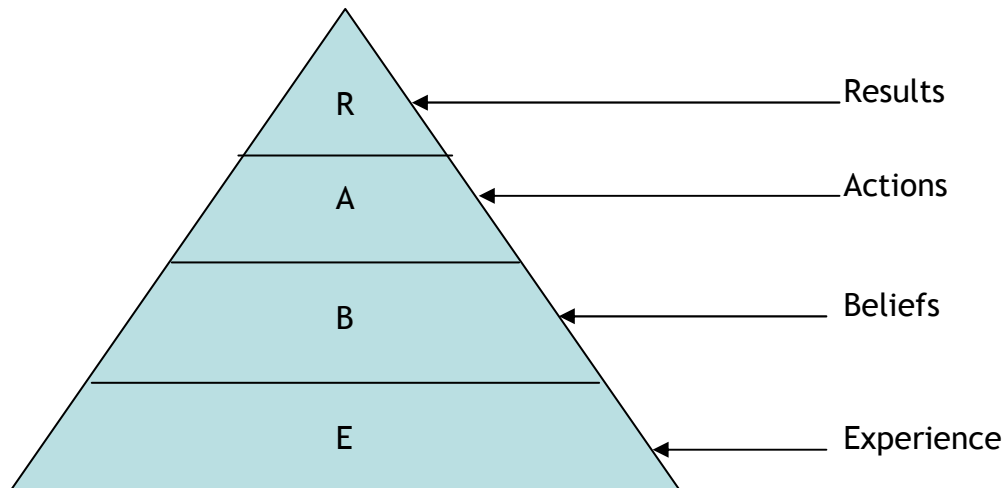


Figure 10: The Results Pyramid (Connors and Smith 2002, p12-13)

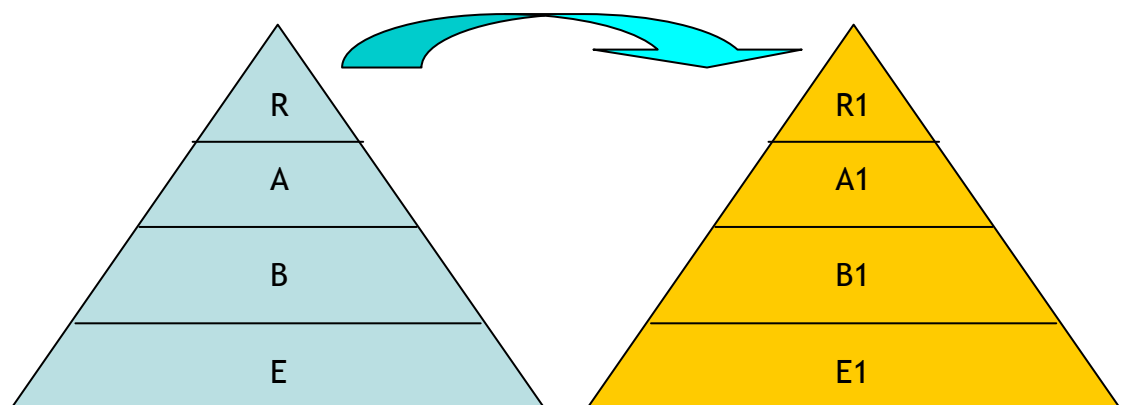


Figure 11: The Results Pyramid transformation (Connors and Smith 2002, p12-13)

To achieve transformation and therefore new results (R1 in figure 11) traditionally we have focused our efforts on changing the results layer at the top of the pyramid, ignoring the relationships it is built upon with experience forming the base layer. The concept is by altering the front-line staff's experience (E to E1 in figure 11) and the changed beliefs (B1) actions (A1) and results (R1) will follow. This can only be achieved with an empowered support model.

The Institute for Healthcare Improvement²⁷ have acknowledged this model within their approaches to sustainable change. Their original focus on education progressed through collaboration to a focus on encouraging social movement, as evidenced by the shift from the Breakthrough Series to the 100, 000 Lives Campaign (Institute for Healthcare Improvement). Traditionally the approach that has been employed to provide the capacity and demand training has been one of education moving towards collaboration. This needs a whole shift into the sphere of creating a culture of empowerment to embed the tools in the service arsenal.

²⁷ See Glossary, page 10.

Organisational and service specific delivery:

It is clear from the responses to the questionnaires and the enthusiasm which occurred within the action research project that the most conducive environment to deliver the training of these tools is within one organisation and preferably within one service. This ensures transferability of the tools is clear to participants. Using an organisational boundary for the delivery provides a safety area in which staff can explore issues within their service and the wider organisation. This learning has adapted the training provision for the Skills4Change programme, which has moved from regional delivery to organisational delivery. This also ensures clear linkage with senior support, reinforcing the validity and importance of the training. This can therefore link to and build upon Connors & Smiths Results Pyramid (2002), facilitating empowerment based upon experience and beliefs.

Both the analysis of the questionnaires in the background section of this project, and the effectiveness of the action research approach focusing on one specific service and team, highlight the advantages of organisational and service specific delivery for service improvement training. This is supported by the wide use of the Clinical Microsystems²⁸ approach in England, as it focuses on the department or service delivery level of the healthcare system:

‘we have the patient and the family as the smallest provider unit in the health system; they join with providers and staff to form clinical microsystems’
(Nelson et al. 2008, p371)

²⁸ See Glossary, page 9.

The focus at this level provides real change in a scoped environment. It ensures the relevancy of the tools trained is clear to front-line staff as it closely links to their experiences. As can be witnessed by the findings from the action research project, combined with external facilitation and the ‘insider/outsider’ model (Titchen and Binnie 1993), this promotes an empowered staff who will continue to make changes to their service delivery after the facilitation and focus has come to a close. Indeed, Eckholdt and Axtell (1998) highlight six common attributes of corporations who have successfully redesigned themselves, which support the findings of this research (*figure 12*):

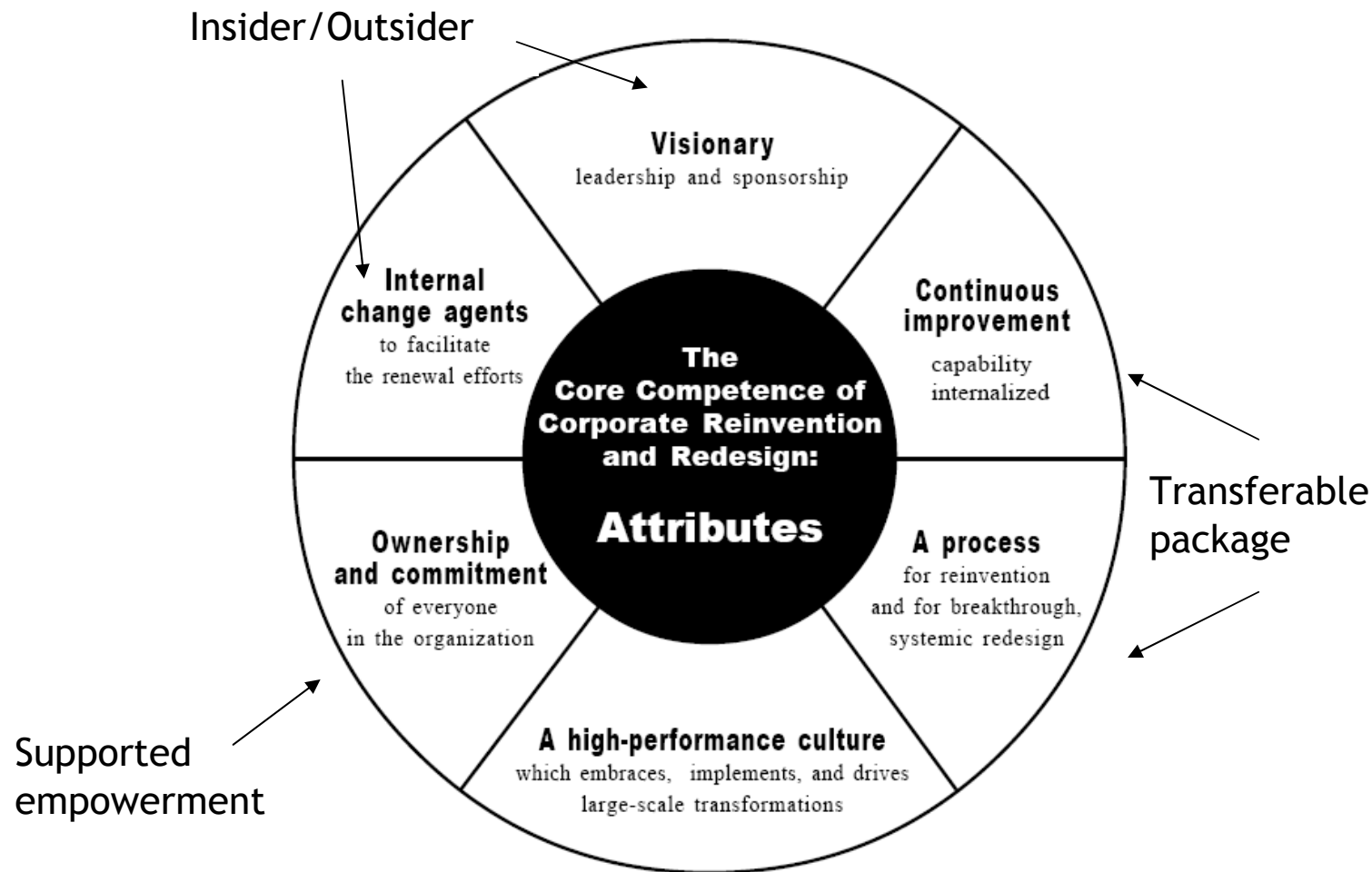


Figure 12: Attributes of the Core Competence of Corporate Reinvention and Redesign mapped against findings from this study (Eckholdt and Axtell 1998)

A combination of the transferable package of training and utilisation of the *'insider/outsider'* model (Titchen and Binnie 1993), provide the supported empowerment element described in the model above. The attribute not covered to date in this study is a pre-requisite to the effectiveness of any change implemented: a high-performance culture. This is an area upon which the wider provision of support NLIAH offers to NHS Wales needs to focus.

The framework for practice development McCormack et. al. (1999) outlines builds upon four enablers looking at an understanding of the context and culture:

- a commitment to user involvement;
- a recognition of the desired practice approaches;
- and a culture fostering team development,
- recognising throughout that sustainable change needs to be practitioner owned; organisationally supported; with a systematic approach.

This can be taken one step further with the utilisation of a critical social theory approach to support and mainstream the action research capacity and demand service improvement package of training, by embedding the change through looking critically at the supporting culture, as it:

'accommodates a variety of research and development approaches that enable persons to address constraining factors that hinder change and creativity'
(McCormack et. al 1999, p259).

In summary, the action research project identified key elements which require developing within the Skills4Change programme. The historical

focus on tools and techniques of the programme, needs to be amended to take into account the organisational and service specific context of delivery. Project teams will require additional data and external facilitation support, to ensure momentum and provide continuity of leadership through the '*neutral zone*' (Bridges 2003, p34) as evidenced by the reflective log analysis in the action research project.

This could be built into a coordinated model to support organisational development across NHS Wales. It would link more closely with the Leadership and Workforce Development arms of NLIAH. Tools, methods and strategies are where the Skills4Change programme and the transferable package of capacity and demand training focus, but NLIAH needs to look at the organisational culture and patterns in which these tools are employed. Without that, no design of empowered change management tools informed by data will provide the systems change needed to meet the current and future requirements of the NHS in Wales.

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Appendix 1: Capacity and Demand Questionnaire

Dear Colleague,

I am currently working on a Masters in Professional Studies concentrating on the use of understanding capacity, demand and flow to inform service improvement.

Within the last two years you attended a Capacity and Demand training course presented by the Service Development team within the National Leadership and Innovation Agency for Healthcare (NLIAH).

My Masters project is aimed towards evaluating NLIAH's provision of Capacity and Demand training to date and to learn from its application within the service to develop a toolkit which can be applied across the NHS, regardless of where services are provided.

The development of this toolkit will be built on the feedback from these questionnaires, interviews with staff and learning gained from an action learning project being undertaken with a NHS team looking at the capacity and demand of their service.

The questionnaire is split into four sections looking at Understanding and application of capacity and demand training; Barriers to the implementation of the learning from capacity and demand training; and Further support and training required.

Please can you therefore take time to complete this questionnaire, and indicate whether you would be willing to take part in an interview to discuss your answers and experience of capacity and demand further? The confidentiality of your responses and your anonymity are assured.

Many thanks
Dominique Bird
Senior Service Development Manager
NLIAH

SECTION A - GENERAL QUESTIONS:

Name: (optional)

Organisation: (i.e. Trust/LHB/Community/Primary care etc)

Job title:

Gender:

Brief description of your area of responsibility/Main duties:

Are you responsible for the management of staff?

If 'yes', how many?

1-5 ☐ 6-10 ☐ 11-20 ☐ 21+ ☐

What are your budgetary responsibilities?

Would you be willing to take part in an interview to discuss your answers and experience of capacity and demand further? Y ☐

N ☐

SECTION B: UNDERSTANDING AND APPLICATION OF CAPACITY AND DEMAND TRAINING

How many times have you referred to the training material/notes from the Capacity and demand training you attended?

NEVER ☐ ONCE OR TWICE ☐ REGULARLY ☐

In your own words can you describe the 3 key elements you learned from the capacity and demand training session you attended?

Have you implemented capacity and demand study in your area of service?

Y ☐ N ☐ (If no, please go straight to SECTION C)

How many times have you applied the tools learnt from the capacity and demand training you attended?

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5+ ☐

In which areas have you applied the tools learnt from the capacity and demand training you attended?

Primary care ☐ Outpatients ☐ Inpatients/Daycases ☐

Therapies ☐ Diagnostics ☐ Emergency services ☐

Other (please specify)

On a scale of 1-5 (5 being the most difficult) how difficult was it to conduct the capacity and demand study?

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

SECTION C: BARRIERS TO IMPLEMENTING THE LEARNING FROM CAPACITY & DEMAND TRAINING

The following section looks at the potential barriers to using the capacity and demand tools. This information will be used to inform further development of this tool.

Did you understand the concepts presented on the day?

Y ☐

N ☐

If 'No', which of the following elements did you NOT understand?

Timing patients through the process ☐

Calculating the 80th percentile ☐

Conversion of Capacity, Demand, Backlog & Activity into time ☐

Comparison of Capacity, Demand, Backlog & Activity in units of time ☐

On a scale of 1-5 (5 being the most difficult) which of these steps caused the most problems in using the tools from the capacity & demand training?

Process mapping the patient flow through the constraint:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Timing a selection of patients through the constraint:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Calculating the 80th percentile for procedures/processes:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Converting the Capacity, Demand, Backlog & Activity into units of time, using the 80th percentile calculation:

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Prioritise the following list from 1 - 10 as to what has been the biggest barrier to implementing the capacity and demand tools (1 being the biggest barrier):

The process is too complex

Handling the information is too complex

Support for the project at a more senior level is absent

Support for the project within the team is absent

I couldn't get access to the information

There is no time to complete this project

This is extra work on my current role

There are no benefits to this project

I did not understand the tools

I did not see how I could apply the tools to my area

SECTION D: FURTHER SUPPORT & TRAINING

How would you rate your level of IT literacy? (1 being able to e-mail, 5 being able to use Excel for generating graphs etc)

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐

Do you think further training in understanding data alongside the capacity & demand training would have been helpful?

Y ☐ N ☐ NOT SURE ☐

Would more examples of the tools applied to your service have been helpful?

Y ☐ N ☐ NOT SURE ☐

Do you think this form of training should be provided on an:

☐ Individualised basis (small teams looking at their own service)

☐ Larger mixed groups

☐ Doesn't matter either way

☐ Not sure

Any further comments:

Thank you for taking the time to complete this questionnaire. Your responses and comments will inform further development of the training provided by the Service Improvement Directorate within the National Leadership & Innovation Agency for Healthcare.

Please return this questionnaire by e-mail to dominique.bird@nliah.wales.nhs.uk or by post to the following address.

If you have any queries please either contact me on the e-mail address above or by phone on 07974 577896.

Dominique Bird
Senior Service Development Manager
NLIAH
Innovations House
Llanharan
CF72 9RP

Appendix 2: National Research Ethics Service Guidelines on what is appropriate/inappropriate for submission to Research Ethics Committees

DIFFERENTIATING AUDIT, SERVICE EVALUATION AND RESEARCH

November 2006

The "Ad Hoc Advisory Group on the Operation of NHS Research Ethics Committees" recommended NRES should develop guidelines to aid researchers and committees in deciding what is appropriate or inappropriate for submission to RECs, and NRES (with the Health Departments and with advice from REC members) has prepared the guidelines in the form of the attached table.

RESEARCH	CLINICAL AUDIT	SERVICE EVALUATION
The attempt to derive generalisable new knowledge including studies that aim to generate hypotheses as well as studies that aim to test them.	Designed and conducted to produce information to inform delivery of best care.	Designed and conducted solely to define or judge current care.
Quantitative research - designed to test a hypothesis. Qualitative research - identifies/explores themes following established methodology.	Designed to answer the question: "Does this service reach a predetermined standard?"	Designed to answer the question: "What standard does this service achieve?"
Addresses clearly defined questions, aims and objectives.	Measures against a standard.	Measures current service without reference to a standard.
Quantitative research - may involve evaluating or comparing interventions, particularly new ones. Qualitative research - usually involves studying how interventions and relationships are experienced.	Involves an intervention in use ONLY. (The choice of treatment is that of the clinician and patient according to guidance, professional standards and/or patient preference.)	Involves an intervention in use ONLY. (The choice of treatment is that of the clinician and patient according to guidance, professional standards and/or patient preference.)
Usually involves collecting data that are additional to those for routine care but may include data collected routinely. May involve treatments, samples or investigations additional to routine care.	Usually involves analysis of existing data but may include administration of simple interview or questionnaire.	Usually involves analysis of existing data but may include administration of simple interview or questionnaire.
Quantitative research - study design may involve allocating patients to intervention groups. Qualitative research uses a clearly defined sampling framework underpinned by conceptual or theoretical justifications.	No allocation to intervention groups: the health care professional and patient have chosen intervention before clinical audit.	No allocation to intervention groups: the health care professional and patient have chosen intervention before service evaluation.
May involve randomisation	No randomisation	No randomisation
ALTHOUGH ANY OF THESE THREE MAY RAISE ETHICAL ISSUES, UNDER CURRENT GUIDANCE:-		
RESEARCH REQUIRES R.E.C. REVIEW	AUDIT DOES NOT REQUIRE R.E.C. REVIEW	SERVICE EVALUATION DOES NOT REQUIRE R.E.C. REVIEW

Appendix 3: Risk Analysis and Countermeasures

Risks	Countermeasures
Sharing of personal experiences - close relationship required with participants for change to be implemented potentially blurring boundaries of professionalism and friendship	Establish clear boundaries at outset of project. Define role as separate from confidant or friend. Reinforce professional roles and responsibilities throughout project
Potential to unearth difficult issues whose resolution may be outside the remit of this project	Clearly define role, responsibility and expectations of the project with a clear process outlining how issues will be raised to senior management
Cost of staff taking time out from service delivery for service improvement	Propose to utilise audit days for project. If not possible will present a cost benefit analysis to management team to illustrate cost of continuing at current service provision versus cost of improved service.
Development of a two-tier service, where improvements have risen service provision, i.e. reduced access times	Sharing results, outcomes and key areas of learning with Therapies network and NLIAH's database of good practice

Risks	Countermeasures
<p>Unearth unprofessional practices and potential misconducts</p>	<p>Make clear and explicit roles as professionals. Whilst each issue and appropriate action will be judged individually, any areas of misconduct potentially causing risk to the safety of patients or staff will be discussed with the member of staff and management as appropriate.</p> <p>However, it is not within the remit of this project to resolve these issues.</p>
<p>Potential resource implications to project re. Access 2009 programme - may produce evidence that service is currently over-staffed</p>	<p>Unlikely risk, however neither this project, nor NLIAH fulfils the function of performance management. Information will therefore not be shared outside NLIAH and the participating Trust (including the Delivery and Support Unit, Regional Offices, Local Health Boards and Welsh Assembly Government) until approval is gained</p>

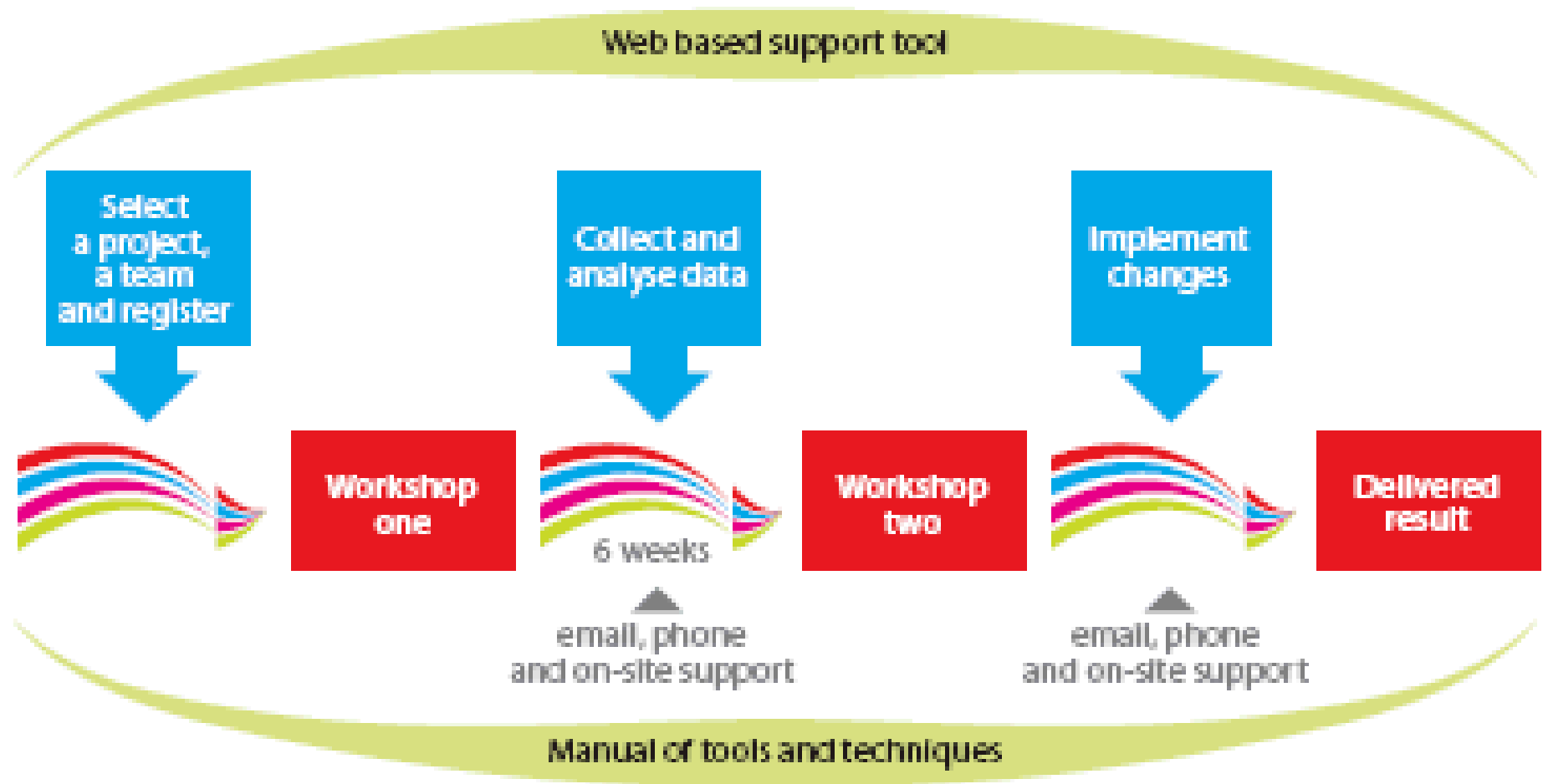
Risks	Countermeasures
<p>Potential that not all the team will want to be part of the research project as they are currently a nominated group/service area by their line manager</p>	<p>Project will be split into two parts: Service improvement project will involve whole team, as viewed by Trust as forming part of their current roles Volunteers for extra information, i.e. diaries, skills gaps etc. will be requested All data will be verified and written, informed consent required.</p>
<p>Unearth uncomfortable experiences and emotions regarding current service provision</p>	<p>Reassure team through the benefits of research to others and utilise team as a support function. It will be made clear that participants can withdraw at any time, and are not required to share information which may cause them or others harm</p>

Appendix 4: Feelings Feedback

The following anonymous feedback was captured at the final meeting with the Paediatric Occupational Therapy team. The team were asked to reflect on their emotions throughout the project. The team were then left to capture on separate post-it notes how they felt at the beginning of the project and how they felt now, at the conclusion of the external support .

Beginning of project	Conclusion of external support
Nervous about process	Confident about process
Unable to see way forward with Paeds waiting list management	Vindicated
Unable to prove my feelings that service didn't have capacity to meet demand	Hopeful
Felt ineffective as a manager	Glad that staff are happier and pleased with process
Apprehensive	Positive
Cautious	Productive
Interested	Hopeful!!
Confused	Understanding of service greatly improved
Apprehensive	Confident to use tools in other parts of service and organisation
Not sure of intricacies of service	Positive!
Hopeful that project would provide clarity	

Appendix 5: Skills4Change Programme Schematic



Appendix 6: Sample of Action Research session questionnaires

Process Mapping Workshop Review

Throughout this project you will be asked at each of the sessions to review what you have learnt to date; how you feel the project is progressing; whether you feel confident in the tools and techniques you are learning and applying to your service; and whether there are any further skills training you feel you may need to take the service improvement forward.

All your comments on these review forms will be kept in confidence and will inform future development of the NLIAH approach to service improvement, and specifically capacity and demand analysis.

For each question can you note on a scale from 1 to 5 (5 being strongly agree) how strongly you agree with the following statements:

Initial Scoping Meeting

Before attending this meeting I understood what would be discussed and what was required of me:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

After the meeting I felt clear about the project we were undertaking:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Shadowing Sessions (if applicable)

I understood the purpose of the shadowing sessions and was comfortable to take part:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Process Mapping (current state)

I understood the purpose of this session and my contribution:

1
☐

2
☐

3
☐

4
☐

5
☐

Comments:

I could confidently facilitate a process mapping session with my colleagues:

1
☐

2
☐

3
☐

4
☐

5
☐

Comments:

I would recommend any future project I am working on starting with a process mapping session:

1
☐

2
☐

3
☐

4
☐

5
☐

Comments:

Process Mapping (future state)

I feel the team has outlined a clear way ahead for the future of our service:

1
☐

2
☐

3
☐

4
☐

5
☐

Comments:

Action Planning

As a team we have full ownership of this project and I feel I have an essential part to play

1
☐

2
☐

3
☐

4
☐

5
☐

Comments:

The way ahead for this project is clear to me:

1

2

3

4

5

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
--------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Comments:

Skills analysis:

I/the team would benefit from further training in process mapping:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

I/the team would need further training in project management to take this work forward:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

I/the team would need further training in data collection and understanding of data to take this work forward:

1	2	3	4	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments:

Thank you for completing this review form. Please feel free to add any further comments, points of learning or reflection:

Appendix 7: Transferable Package of Capacity & Demand Training

Following the project outlined in this dissertation, a two-tiered approach to delivering a transferable package of capacity and demand training have been developed.

The first tier is the Capacity and Demand section incorporated into the Skills4Change programme currently run by the Service Development and Improvement Directorate within NLIAH. As outlined previously, the delivery and content of this programme has been informed by the findings of this dissertation, and has progressed from regional, mixed-service delivery to organisational, mixed-service delivery, ensuring that the 'empowerment with support' model is linked to clearly with the organisational agenda. This was developed in collaboration with the Skills4Change Programme team who are mentioned in the acknowledgments.

The second tier of delivery expands this approach to incorporate specific learning and recommendations from the employment of the action research model in this project; providing a more service-specific, individual team step-by-step approach, incorporating a capacity and demand analysis database developed purely for therapy services, which incorporates the package of care approach, i.e. demand converted into how many agreed sessions of care delivered, as opposed to the traditional length of one outpatient appointment, or length of theatre time required.

The tools and outlines of these two tiers are included in the following pages.

Skills4Change Capacity and Demand section:

The following pages include sections from the day 1 workbook for the Skills4Change programme, which incorporates the Capacity and Demand section, whose development has been informed by this study. A complete copy of the workbooks for the Skills4Change programme will accompany submission:

skills4change

developing teams for the future nhs



This is the workbook to accompany Day 1 of the Skills4change programme.

It should be used as a guide throughout the workshop and contains pages for exercises conducted throughout the day.

It can also be used as a reference guide post-programme, so space has been left for delegates to add their own notes.

Skills4change Programme Aim:

Provide the participants with an overview of an approach, to enable process change in their department/organisation, and the use of some appropriate tools, which help facilitate the changes.

Objectives:

1. Be able to explain the 7-step approach to problem solving.
2. Be able to demonstrate the use of the 7-step approach and use of appropriate tools
3. Be confident in the use of this approach in their workplace

This workbook is produced to support day 1 of the Skills4Change Programme. It draws on materials from a number of other programmes. We would like to acknowledge the work of Kate Silvester which has been instrumental in the understanding of flow management and capacity and demand measurement in the NHS in England.

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Day 1 Agenda

Time	Title	Objective	Who
09:00	Introduction	<ul style="list-style-type: none"> • Aims • Objectives of the workshop • Introduce facilitators 	
09:30	Step 1: Define the Problem The 7 Step Approach	<ul style="list-style-type: none"> • Understand the concept of change methodologies • Know about the 7 step approach 	
10:15	Patient & Carer Involvement	<ul style="list-style-type: none"> • Be able to appreciate the importance of listening to, understanding and building in the patient & carer to the changes you are making 	
10:30	Break		
10:45	Step 2: Understand the Current Process Process Mapping	<ul style="list-style-type: none"> • Describe what process mapping achieves • Be able to carry out process mapping in your place of work 	
11:30	Step 2: Understand the Current Process Data & Information	<ul style="list-style-type: none"> • Be able to design a data collection and stratification process 	
12:30	Step 2: Understand the Current Process Activity, Capacity & Demand	<ul style="list-style-type: none"> • Describe what an understanding of capacity and demand achieves • Be able to carry out capacity and demand analysis 	
13:15	Lunch		
14:00	Step 2: Understand the Current Process Scheduling & Flow	<ul style="list-style-type: none"> • Be able to understand what is happening within a process step 	
14:45	Dealing with People	<ul style="list-style-type: none"> • Be aware of the human elements to change 	
15:15	Break		
15:30	Communicating through Storyboards & Communication Planning	<ul style="list-style-type: none"> • Be able to compose a storyboard and conduct a communication plan 	
16:15	Action Planning	<ul style="list-style-type: none"> • Create individual action plan based on steps 1 & 2 	
17:00	Close		

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Personal Notes

Step 2: Understand the Current Process Activity, Capacity & Demand



Key Learning Points

We need to ensure we understand our demand and activity in units of time so we can compare their relationship with our available capacity.

Activity is not the same as capacity - there may be something limiting your capacity: map the process!

Variation in process timings need to be investigated and where possible reduced.

Use the 80th percentile as the most accurate allocation of time; not historical allocations, or averages.

Capacity and demand analysis can be applied to any process: clinics, theatres, home visits, admin processes etc.



Personal Notes

Measurement - all in the same units:

More detailed understanding of your processes by looking at how you can measure current and potential performance:

- Activity
- Demand
- Backlog All in the same units!
- Capacity

Dangers of using activity for future profiling, for identifying demand, for identifying capacity - activity only shows us what we did, not what we can do if we streamline our processes and ensure our constraint is maximised, nor can it show us what our demand is - so why do we focus on activity reports!?

Need to understand the interaction between your capacity and your demand to fully understand your processes.

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Personal Notes

Definitions:

- Demand** (incl. reviews, repeats, follow-ups, ward referrals, post-ops etc) multiplied by the time it takes to process a request
- Activity** number of requests processed multiplied by the time it takes to process a request
- Bottleneck** currently limiting activity - map the process to identify
- Capacity** available time for each resource
- Constraint** whatever defines your capacity - usually the most expensive resource and essential to the delivery of that process
- Backlog** number of requests awaiting to be processed multiplied by the time it takes to process a request

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Huddersfield Waiting List



Personal Notes

Comparable units:

The data that you will receive from your information teams will be in the form of numbers of referrals, numbers of patients, numbers of requests, which is fine if you are looking at cataracts, for example, which all require approximately the same amount of resource to treat, but what if we were looking at orthopaedic operations.

Numbers of patients/requests etc. takes no account of case mix.

We historically focus on the number of patients/requests going through a system, not how long it will take to treat/process them.

We need to convert our capacity, demand, backlog and activity into comparable units of time (hours), for the same time period. We need to compare apples with apples, and stop comparing apples with pears!

How long do we allocate to a process?

- Averages
- Historical allocations
- 80th percentile of the variation



Personal Notes

Averages:

NHS seems obsessed with using averages, and it is a very dangerous measure to use. The average of a process masks the variation within the process. Variation is inherent in any process, but

80% of the variation in a patient's journey
is under our control

We need to look at eliminating unnecessary variation, for example, batching.

Historical allocations:

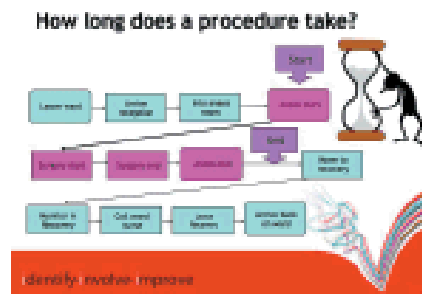
Are these decided more by the numbers of patients that need to be seen within a clinic, as opposed to how long each of them will really take?

We need to understand how long patients/requests are currently taking to be able to understand how our demand and capacity interact.

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Personal Notes



Example:

In this example, the team process mapped the patient journey through theatres to identify the steps through which the patients passed through the constraint, which in their case was from Anaesthetic start to Anaesthetic end.

They then developed a template of the steps of the patient through that part of the process and timed a selection of patients through the steps.

Theatre exercise

On the graph paper in the workbook:

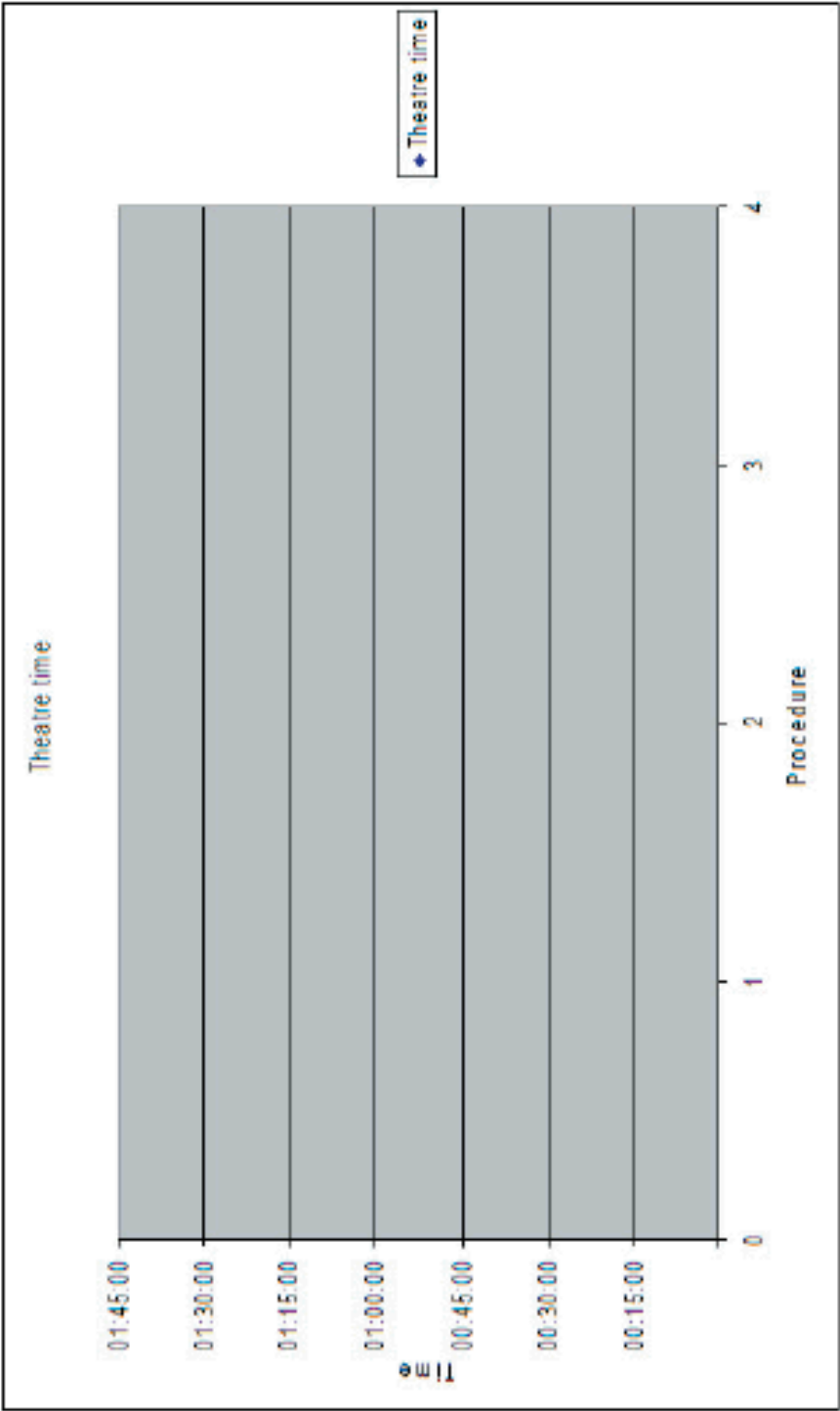
- Plot the theatre times for each procedure
- Identify whether procedures can be clumped, i.e. are there similar timings?
- Is there wide variation for some procedures?

Identify involve improve



Procedure 1	Procedure 2	Procedure 3	Procedure 4
00:25:00	01:02:00	00:28:00	00:55:00
00:32:00	01:34:00	00:32:00	01:02:00
00:37:00	00:35:00	00:34:00	00:56:00
00:31:00	00:55:00	00:32:00	00:57:00
00:29:00	00:45:00	00:27:00	00:58:00

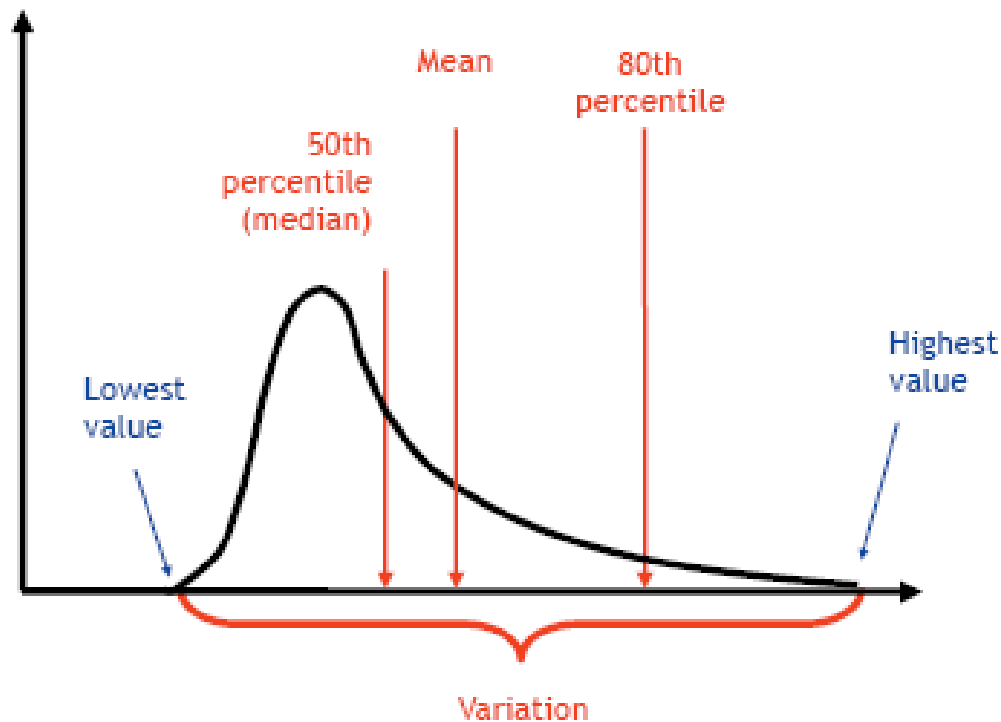
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Personal Notes



80th percentile:

The 80th percentile is the most statistically accurate measurement to use when looking at a process with an inherent amount of variation.

Why?

- Median/50th percentile - captures peak of timings, but large amount not captured and will have a huge impact on the process
- Average - captures more variation, but still not enough to deal with the large amount of variation - half the time you will overrun
- 80th percentile - captures 80% of the process timings, where there is overrun, impact will be reduced

80% of what?

- Used for allocating times to processes
- Also used for calculating capacity required - capture daily demand - calculated 80th percentile - set capacity at this point

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	Theatre time	Ascending order
1	00:25:00	
2	00:32:00	
3	00:37:00	
4	00:29:00	
5	00:34:00	
6	00:34:00	
7	00:35:00	
8	00:55:00	
9	00:45:00	
10	00:28:00	
11	00:32:00	
12	00:34:00	
13	00:32:00	
14	00:27:00	
15	00:45:00	
16	00:32:00	
17	00:24:00	
18	00:25:00	
19	00:30:00	
20	00:32:00	

First put the above timings in ascending order, within their procedures.

Then calculate the 80th percentile timings for each procedure: how many data points? what is 80% of that number of data points? what is the value at that point?



Personal Notes

What is the 80th percentile of....

100 data points

30 data points

50 data points

25 data points

87 data points

43 data points

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Personal Notes

Another example:

- Primary care on demand clinic which runs every day
- Average of 15 attendances every day
- Traditionally the capacity is set to 15 slots

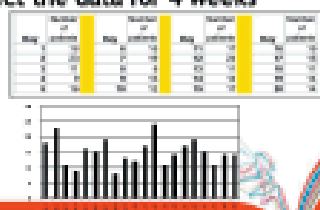


On demand example:

A primary care on demand (walk-in) clinic runs every day and has on average 15 attendances. Traditionally the capacity for this clinic is set up for 15 patients per day.

Step 1

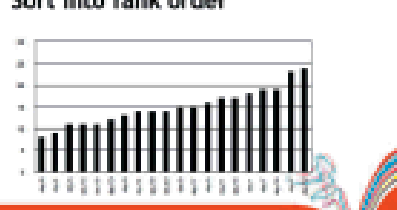
Collect the data for 4 weeks



identify involve improve

Step 2

Sort into rank order



identify involve improve

Collect the data:

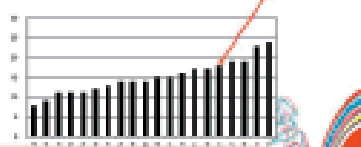
The team collected the data for clinic attendances for 4 weeks: some days there were only 8 patients, others more than 20 arrived.

The team sorted the data into ascending order and calculated the 80th percentile data point:

Step 3

Work out the 80th percentile

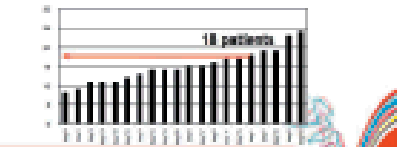
80% of 28 days = 22 days (day 13)



identify involve improve

Step 4

How many patients were seen on day one?



identify involve improve

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To review:
How?

Personal Notes

- Collect data/timings for process
- Sort into ascending order
- Work out what is the 80th percentile point of the number of data points presented
- This is your allocated time

This can be applied to any aspect of processes, so for example, how long does it take for a tender to be processed, for a hotel booking to be made, for an event to be organised, etc. This should be applied to supporting processes as well as patient journey's to ensure a smooth flow of the supporting functions of an organisation.

To conclude:

1. Process map and identify constraint
2. Time a selection of patients/requests through constraint
3. Work out 80th percentile for that process - if there is a huge variation, look for groupings within the data
4. In some situations you will need to agree allocations or packages of care (i.e. one new and 4 follow-ups)
5. Apply your findings to activity, demand and backlog
6. Calculate capacity - available time for each resource
7. Plot all on one graph

How can this be applied in your area?

- Primary care: Nurse clinics? Repeat prescription requests?
- Community: Home visits?
- Non-healthcare: Processing orders/bookings?
- Secondary care: Outpatient clinics?

Discussion & planning

- What are you going to measure?
- How are you going to identify your capacity, demand & activity?
- How do the definitions apply to your project?



.....

.....

.....

Individual Team Step-by-step Approach:

1. Awareness session of tools and techniques with all service staff in attendance
2. Problem identification/Patient group identification with the service managers
3. Scoping and service mapping meeting with the whole team, including time for individual description of the problem and positives of the current service provision
4. Process walk-through and meetings with each individual team member to communicate purpose of project and opportunity for them to raise issues outside of the team environment
5. Aims and objective setting with whole team (utilising Quad of Aims approach) followed by role definition by individuals and commitment to reflect on learning through the project (template developed by team)
6. Process mapping session with relevant staff involved in patient and administrative processes to identify constraint and initial bottlenecks
7. Analysis and action planning session including A, B, C categorisation
8. Process mapping of detailed flow of patient group through identified constraint
9. Timing of a selection of patients through constraint

10. Calculation of 80th percentile timings of above data to develop a process template
11. Facilitate agreement of allocation of care for selected group of patients
12. Conversion of capacity, demand, activity and backlog into time using 80th percentile timings and agreed allocations of care
13. Identify from step 7 and step 12 common areas to target for redesign: plan first two PDSAs
14. PDSA one feedback
15. PDSA two feedback
16. Next steps

Appendix 8: Sample Reflective Log from one Action Research Participant

SESSION 1: 21/10/06

Introductory session, fact finding session and discussion re: Paediatric service as it currently stands - staffing, referrals caseloads and the day to day running procedures.

Agreed the goals for reviewing the service and issues that need to be addressed and or we would like to change.

Our different roles were discussed at length and the complicated nature of the service highlighted with different funding issues discussed and difficulty of separate services complementing the core service.

At the beginning of this session I was a little apprehensive and cynical about how this review would pan out and what level of information we could discuss, but with clear goals and guidelines agreed our views were heard in a supportive and constructive manner.

My number one priority and goal was to improve the efficiency and effectiveness of the service and highlight the need to increase the staffing numbers as I truly believe we have got to a point where the standards that are expected of us with regards to waiting lists and care packages are unachievable with only 2 qualified full time members of staff.

I am aware that we have to prove this and am happy to work hard to do this, I felt positive when I left the meeting but did have doubts if the review would continue or gradually fade out as it has in the past.

SESSION 2: 23/10/06

Feedback from the shadowing visits were discussed and analysing the time constraints of these helped highlight the time consuming nature of them - especially if they are not in.

The session helped us look at issues regarding doubling up visits block visits and joint visits, all of which we currently do.

We have considered the appropriateness of doing as many home visits in the past but found that the DAN rate to clinic increased.

Parking issues were highlighted as a problem for staff when we return and for parents when they attend clinic appointments

SESSION 3:02/11/06

Waiting list and referral mapping exercise - discuss problems and issues with referral criteria prioritisation and the quality of the referrals received.

This session allowed us to take time out of the daily case load to look at and highlight issues around referrals that we knew were evident but didn't have the time to stop and address.

Pediatricians favored referral method is via letters and we developed and changed the referral form so it was pediatrician friendly and multi-disciplinary.

Appointment booking was also addressed and quicker methods were identified I think this is a productive change and will allow us to plot the use of a PDA - I do feel that eventually we will have to move away from paper diaries so I think we might as well trial it now.

I felt this meeting was important to make us look at all aspects of the therapy process and consider changes that will free up our time use our staff productively and reduce duplication - all positive outcomes.

I also felt that we were finally being listened to and our worth as a service was being acknowledged even though we don't save bed days!!!! So much so that there may be the possibility of a secondment to assist with proving the need for extra staffing - yippee!!!!

SESSION 4:18/12/06

This session productivity was limited due the amount of staff who could not attend but gave us the opportunity to recap on some of the timing issues and process mappings to try and establish the average time a therapist spends with One child in one block of therapy - I found this session an eye opener and a surprise when you actually work out how much time is spent on one child.

I hope we didn't scare [Data Analyst] too much as we had a lot of information to go through and I suppose you always have a moment when you cant see the wood for the trees when doing a review like this .

This was also the first meeting our seconded therapist attended proving that outcomes are being achieved from these meetings as we don't often get funding for extra help unless the waiting list is looking dangerous!!!

SESSION 5: 07.02.07

This session was recap on what we had achieved so far which I felt was all positive considering we are doing this along side our clinical caseload!

I think this session gave me the chance to refocus my thinking and logically think about the review as a system of steps to go through and think about the patient fits in to them and the experience they will have.

It also gave us the chance to tackle the admin issues that can often distract us from delivering the hands on therapy and for [Paediatric OT colleague] and me to agree regular referral meetings to keep on top of prioritising the waiting list

[Data Analyst] and [Researcher] lead us through the data info which unless they explain it to me what i'm looking at it still just looks like lines on paper! But I understand that it prove we need more staff - thankfully!

SESSION 7: 27/04/07

This Session was very productive as I felt we reviewed and signed a lot of action points that we completed and were in us.

Mainly admin based info but this will make a big difference to us.

The secoundment has now finished and although is has been useful and shown an increase in service delivery it has been a challenging time for [Paediatric OT colleague] and I with regards to the level of supervision needed by the staff member. This has put us under time pressure and anxious to get through the waiting list to prove our need for more staff.

I think it has highlighted issues for the future with regards to employing new staff who have the necessary experience and characteristics to

specialise in paediatrics and that if we had a technician post, some treatment programmes and work could be done by them with the necessary training freeing up the qualified therapist further.

I have also gained a new PDA to trial and hope I don't break or lose it - I will need therapy to detach me from my paper diary but am willing to give a go!!!

SUMMARY

I have enjoyed being part of the review to date and my initial concerns have not come to surface! I have some aspects of it challenging on a time level as we have continued to carry our normal caseloads and waiting list pressures but the extra staffing and sessions out helped make this manageable.

I hope that the changes we have made continue to work and that all our hard work pays off with more funding for this currently under funded core service.

My main worry is that when these meetings the emphasis on our service will disappear and we will end back to square one with [Paediatric OT colleague] and I needing the therapy!!!!

For me the day to day challenges remain meeting the waiting list targets and feel the future change to 24 weeks will be currently unachievable I also feel that agreeing packages of care is essential for us to be in line with other services in Wales and provide equity to our service users.

Paediatrics is specialised and sought after job in Occupational Therapy and we need to invest in our service if we want to attract new and experienced staff and keep investing in the ones we have!!

Thank you for the opportunity, time and assistance in listening to the positives and negatives and helping us find our way through all the policies, procedures and politics in the paediatric service with a more objective focus - I hope it will continue to change for the better.